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ABSTRACT

This report presents and discusses tabular statistical data covering trends in population distribution, education, social and economic well-being, and employment in the United States and the Great Lakes region. Section I, "Population Distribution and Change," contains a map of U.S. population growth projections for 1980-2000 and three tables with estimates for civilian, ethnic group, and total U.S. and Great Lakes populations. Section II, devoted to education, covers educational attainment and enrollment, highlighting growing disparities between at-risk and White/Asian American groups. This section also discusses student academic preparation and reasons for attending a particular college and pursuing lifelong learning. Section III uses numerous tables and maps to summarize socioeconomic trends concerning Scholastic Aptitude Test scores, family income, the financial status of college-bound high school seniors, and poverty rates. One table, "The Hierarchy of Poverty," shows the decline of the two-parent family, evidenced by nearly a quarter of all American children living in poverty. Section IV discusses statistics on literacy, labor force characteristics, and employment trends. Included are 15 attachments covering various employment topics, such as performance appraisal, attracting and keeping good employees, employment policies, the changing nature of work, the great jobs mismatch, teenage employment, and the social costs of dropping out of secondary school. (MLH)

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PREPARING FOR OPPORTUNITIES AND PITFALLS ... OF THE FUTURE

CHANGES, CHANGES, CHANGES --- DEMOGRAPHIC, TECHNOLOGICAL, EDUCATIONAL, EMPLOYMENT AND SOCIO-ECONOMIC

A Presentation for the
1988 College and University Personnel Association
Midwest Conference

Hyatt Regency, Illinois Center
in Chicago

U.S. DEPARTMENT OF EDUCATION
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MANPOWER REPORT 88-4

25 May 1988

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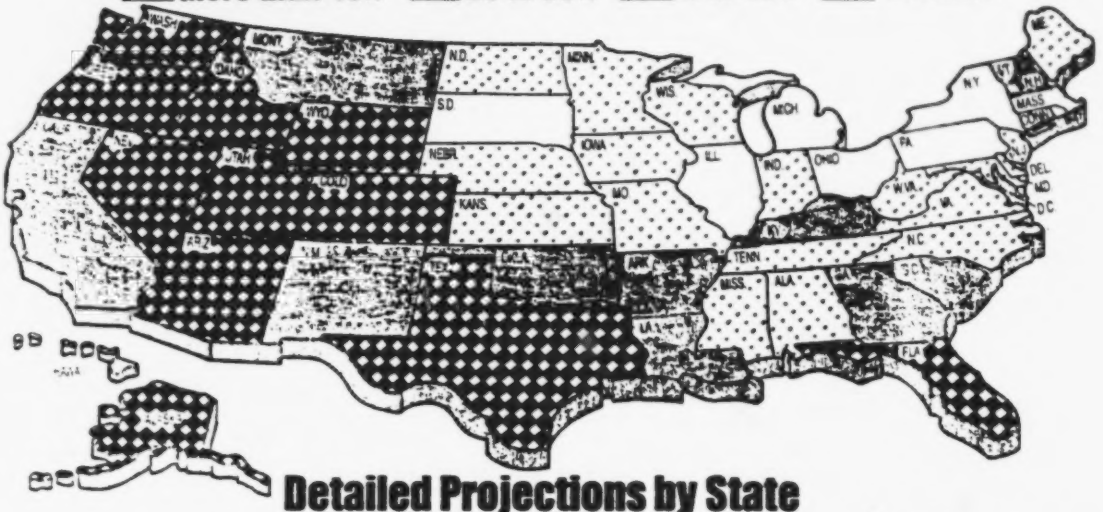
I. POPULATION DISTRIBUTION AND CHANGE

Between 1980 and 1985, the U.S. population grew 5.4 percent, from almost 227 million persons to 239 million, according to the Census Bureau. This growth has been regionally localized, with only 18 states experiencing greater than average growth. Primary growth has been in the southwest, the southeast, and the west, with this growth expected to continue to the year 2000. Selected metropolitan areas are also expected to continue experiencing growth, such as in Boston and New York City. Five states (plus D.C.) have experienced population loss. The greatest reduction or least increase in population has occurred in previously heavily agricultural or industrial states, such as the Great Lakes or Plains states. [As of January 1, 1988, the total U.S. population had grown to 245 million.]

MAP 1

Population Growth 1980-2000

More than 40% | 20 to 39% | 0 to 19% | Decline



Detailed Projections by State

	Population in 2000	Change From 1980	1980 Rank	2000 Rank
Alabama	4,415,300	Up 13.5%	22	24
Alaska	630,700	Up 57.5%	50	49
Arizona	5,582,500	Up 105.4%	29	15
Arkansas	2,835,400	Up 24.1%	33	32
California	30,613,100	Up 29.3%	1	1
Colorado	4,656,600	Up 61.2%	28	21
Connecticut	3,062,400	Down 1.5%	25	29
Delaware	638,200	Up 7.2%	47	48
Dist. of Columbia	376,500	Down 41.0%	–	–
Florida	17,438,000	Up 79.0%	7	3
Georgia	6,708,200	Up 22.8%	13	11
Hawaii	1,277,700	Up 32.4%	39	42
Idaho	1,512,200	Up 60.2%	41	39
Illinois	11,187,500	Down 2.0%	5	6
Indiana	5,679,200	Up 3.4%	12	14
Iowa	2,972,100	Up 2.0%	27	30
Kansas	2,494,400	Up 5.6%	32	34
Kentucky	4,399,900	Up 20.2%	23	25
Louisiana	5,159,800	Up 22.7%	19	19
Maine	1,308,000	Up 16.3%	38	41
Maryland	4,581,900	Up 8.7%	18	22
Massachusetts	5,490,400	Down 4.3%	11	16
Michigan	9,207,600	Down 0.5%	8	8
Minnesota	4,489,400	Up 10.1%	21	23
Mississippi	2,939,200	Up 16.6%	31	31
Missouri	5,080,000	Up 3.3%	15	20

	Population in 2000	Change From 1980	1980 Rank	2000 Rank
Montana	963,000	Up 22.4%	44	44
Nebraska	1,661,900	Up 5.9%	35	38
Nevada	1,918,800	Up 140.1%	43	36
New Hampshire	1,363,500	Up 48.1%	42	40
New Jersey	7,427,600	Up 0.9%	9	9
New Mexico	1,727,300	Up 32.9%	37	37
New York	14,990,200	Down 14.6%	2	4
North Carolina	6,867,800	Up 16.9%	10	10
North Dakota	682,000	Up 4.5%	46	47
Ohio	10,356,800	Down 4.1%	6	7
Oklahoma	3,944,500	Up 30.4%	26	27
Oregon	4,025,300	Up 52.9%	30	26
Pennsylvania	11,207,600	Down 5.6%	4	5
Rhode Island	925,800	Down 2.3%	40	45
South Carolina	3,907,100	Up 25.3%	24	28
South Dakota	687,600	Down 0.4%	45	46
Tennessee	5,419,600	Up 18.1%	17	17
Texas	20,739,400	Up 45.8%	3	2
Utah	2,777,400	Up 90.1%	36	33
Vermont	625,000	Up 22.2%	48	50
Virginia	6,389,400	Up 19.5%	14	12
Washington	5,832,500	Up 41.2%	20	13
West Virginia	2,067,700	Up 6.1%	34	35
Wisconsin	5,215,500	Up 10.8%	16	18
Wyoming	1,002,200	Up 112.9%	49	43
U.S.	**267,461,600**	**Up 18.1%**	–	–

USA:SWR—Basic data: U.S. Dept. of Commerce

In 1986, the U.S. civilian population numbered approximately 239.4 million, an increase of 6.4 percent since 1980. In contrast, the Great Lakes states (i.e., Illinois, Indiana, Michigan, Ohio, and Wisconsin) increased only 0.1 percent to 41.7 million. This slight gain, however, represents a turnaround increase from a population decline until 1984. Although only three of the five Great Lakes states experienced an increase compared with 1980, all five states have experienced gains since 1984. The major reason for the slight increases only is a negative net civilian migration for all five states.

TABLE 1

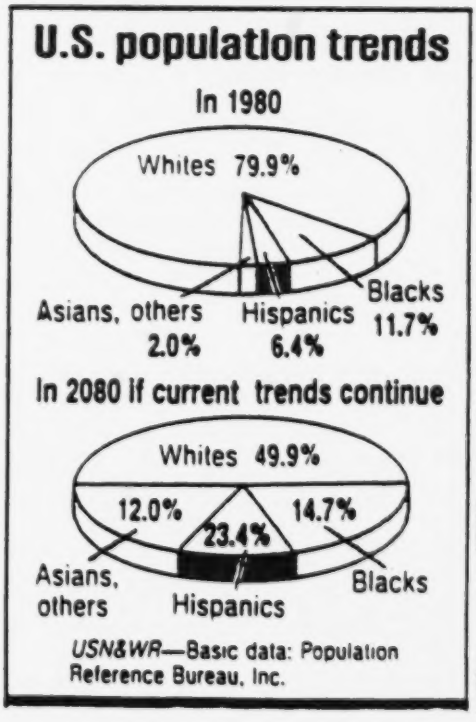
ANNUAL ESTIMATES OF THE CIVILIAN POPULATION OF THE U.S. AND THE GREAT LAKES STATES: 1980 - 1986

(numbers in thousands)

					POPULATION CHANGE 1980 - 1986		POPULATION CHANGE 1984 - 1986		COMPONENTS OF CHANGE: 1980-1986			
											Net Civilian Migration	
	1980	1982	1984	1986	Number	Percent	Number	Percent	Births	Civilian Deaths	Number	Percent
TOTAL U.S.....	224,968	230,327	234,762	239,357	14,389	6.4%	4,595	2.0%	22,922	12,623	4,241	1.9%
Total Grt Lakes	**41,616**	**41,537**	**41,512**	**41,663**	**47**	**.1%**	**151**	**.4%**	**3,993**	**2,274**	**NA**	—
Illinois.....	11,388	11,440	11,484	11,512	124	1.1%	28	.2%	1,139	636	-369	-3.2%
Indiana.....	5,485	5,479	5,486	5,496	12	.2%	10	.2%	516	297	-199	-3.6%
Michigan.....	9,252	9,108	9,051	9,134	-118	-1.3%	83	.9%	863	477	-487	-5.3%
Ohio.....	10,787	10,765	10,729	10,738	-49	- .5%	9	.1%	1,015	608	-442	-4.1%
Wisconsin....	4,704	4,745	4,762	4,783	79	1.7%	21	.4%	460	256	-119	-2.5%

"NA": Not available.

SOURCE: U.S. Dept. of Commerce (Bureau of the Census), State Population and Household Estimates, with Age, Sex, and Components of Change: 1981-86 (Current Population Reports, Series P-25, No. 1010). September 1987.



The most rapid growth in the U.S. population is occurring for ethnic-minority groups, especially Hispanics and Asian Americans. By the year 2000, non-Hispanic Whites may comprise two-thirds of the total U.S. population (down from the 1980 proportion of 80%), and by 2020, only about half the total population. Major reasons for this disparate growth include immigration and higher birth and fertility rates for Minorities (especially Hispanics and Blacks) than for Whites.

The fastest-growing geographic regions are reflecting these ethnic-minority growth rates. In addition, ethnic-minorities have tended to concentrate in inner cities, while Whites have been moving to suburban areas (where job growth is occurring) outside the major cities (which have been losing high-paying jobs).

In 1980, ethnic minorities were not as prevalent in the Great Lakes States as in the U.S. in general. Whereas one of every five people in the U.S. was a Minority, one of every seven in the Great Lakes States was a Minority. Moreover, in only one of the five states (Illinois) did the ratio exceed the U.S. ratio. The proportional distribution of Minorities within the states also varied across the states. For example, most Spanish-descent and Asian-American persons in the region lived in Illinois (especially in Chicago), while most Native Americans lived in either Michigan or Wisconsin. Almost all Blacks in the region live in Illinois, Michigan or Ohio.

TABLE 2
POPULATION BY ETHNIC GROUP FOR THE U.S. AND THE GREAT LAKES STATES: 1980

	Total		White Non-Hispanic		Minority									
					Total		Black,Non-Hisp		Spanish		Native Amer.		Asian. Amer.	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
United States	226,545.8	100.0%	180,866.8	79.8%	45,679.0	20.2%	26,091.9	11.5%	14,603.7	6.4%	1,432.8	.6%	3,550.6	1.6%
Total Grt.Lakes	41,682.2	100.0%	35,673.4	85.6%	6,008.8	14.4%	4,509.9	10.8%	1,061.5	2.5%	114.1	.3%	323.2	.8%
Illinois	11,426.5	100.0%	8,948.1	78.3%	2,478.4	21.7%	1,660.1	14.5%	634.6	5.5%	17.3	.2%	166.4	1.5%
Indiana	5,490.2	100.0%	4,959.4	90.3%	530.8	9.7%	411.5	7.5%	86.5	1.6%	9.4	.2%	23.4	.4%
Michigan	9,262.1	100.0%	7,812.0	84.3%	1,450.0	15.7%	1,188.6	12.8%	157.6	1.7%	43.0	.5%	60.9	.7%
Ohio	10,797.6	100.0%	9,543.7	88.4%	1,253.9	11.6%	1,068.2	9.9%	120.0	1.1%	14.6	.1%	51.1	.5%
Wisconsin	4,705.8	100.0%	4,410.1	93.7%	295.6	6.3%	181.6	3.9%	62.8	1.3%	29.8	.6%	21.4	.5%

Source: 1980 U.S. Census Reports.

Between 1980 and 1987, the number of Hispanics in the U.S. increased 30 percent -- from 14.5 million to 18.8 million -- five times the growth rate for the non-Hispanic population. By 2000 to 2010, Hispanics could comprise the largest U.S. ethnic-minority group, with close to double its present size. The fastest-growing segment of the Hispanic community comprises immigrants from Central America, but the largest segment comprises Hispanics of Mexican heritage.

Asian Americans, the fastest-growing ethnic group in 1985, now are the second-fastest-growing group. Still, they comprise the third-largest Minority group and are expected to remain such for some time to come.

The U.S. population in general is also aging. Between 1980 and the year 2000, the median age will increase from 30 years to 35 years. This reflects increasing life expectancy and decreasing birth rates, especially for Whites. For the first time in U.S. history, as of 1983, the number of retirement-age people exceeded the number of teenagers. By the year 2020, there will be two retirement-age persons for each teenager.

Age groups which are expected to increase in population between 1987 and 1993 (ordered by rate of increase) include 45 to 54 year olds, 35 to 44 year olds, 75 year olds and older, 5 to 14 year olds, and 65 to 75 year olds. Therefore, companies benefiting from these population changes should include those that service needs related to families, financing, elementary education, and nursing care.

Consistent with these expectations, between 1980 and 1986, the greatest increases occurred in groups 25 through 44 years of age and retirement-age groups (65 and older). In addition, increases also occurred for the preschool age group (under 5). The picture is less consistent, however, when comparing 1986 with 1984. During these two years, increases also occurred for the high-school age group (i.e., 15-17 years of age). Moreover, the greatest retirement-age increases occurred during these last two years.

Aging Trends

Projected changes in the size of these age groups, 1987-1993:

AGE GROUP	% CHANGE
Under 5	+ 0.7%
5-14	+10.9
15-24	- 9.9
25-34	- 2.9
35-44	+17.6
45-54	+24.7
55-64	- 4.8
65-74	+ 6.1
75 and older	+17.1

South American Demographics

The population age-structure changes for Great Lakes States differs markedly from those of the total U.S. population. Although increases were experienced for the same early-working age groups and retirement-age groups, no increases occurred for the preschool age group, which has actually declined since 1984 especially. Moreover, probably because of the area's climate, the retirement-age groups have not experienced the rate of increase that the U.S. in general has experienced, especially since 1984, again reflecting the area's high out-migration.

TABLE 3

POPULATION ESTIMATES OF THE U.S. AND THE GREAT LAKES STATES: 1980 - 1986

(NUMBERS IN THOUSANDS: INCLUDES ARMED FORCES RESIDING IN EACH STATE)

UNITED STATES

AGE GROUPING	1980	1982	1984	1986	ANNUALIZED POPULATION CHANGE 1980 - 1986 Number	1980 - 1986 Percent	1984 - 1986 Number	1984 - 1986 Percent
TOTAL.....	226,546	231,996	236,477	241,078	2,422	1.1%	2,300	1.0%
Under 5 years...	16,348	17,298	17,830	18,128	297	1.8%	149	.8%
5 to 14 years...	34,942	34,192	33,974	33,855	- 181	- .5%	- 59	- .2%
15 to 17 years..	12,465	11,462	10,968	11,288	- 196	- 1.6%	160	1.5%
18 to 24 years..	30,022	30,012	29,145	27,739	- 380	- 1.3%	- 703	-2.4%
25 to 34 years..	37,082	39,561	41,231	42,784	950	2.6%	776	1.9%
35 to 44 years..	25,635	28,050	30,546	33,068	1,239	4.8%	1,261	4.1%
45 to 54 years..	22,800	22,482	22,494	22,814	2	.0%	160	.7%
55 to 64 years..	21,703	22,113	22,316	22,229	88	.4%	- 87	- .4%
65 to 74 years..	15,581	16,197	16,739	17,325	291	1.9%	586	3.5%
75 years & over.	9,969	10,630	11,234	11,847	313	3.1%	613	5.5%

GREAT LAKES STATES

AGE GROUPING	1980	1982	1984	1986	ANNUALIZED POPULATION CHANGE 1980 - 1986 Number	1980 - 1986 Percent	1984 - 1986 Number	1984 - 1986 Percent
TOTAL.....	41,682	41,606	41,586	41,737	9	.0%	75	.2%
Under 5 years...	3,080	3,136	3,113	3,061	- 3	- .1%	- 26	- .8%
5 to 14 years...	6,631	6,338	6,193	6,035	- 99	-1.5%	- 79	-1.3%
15 to 17 years..	2,354	2,123	2,000	2,034	- 53	-2.3%	17	.8%
18 to 24 years..	5,559	5,406	5,134	4,823	-123	-2.2%	-155	-3.0%
25 to 34 years..	6,718	6,985	7,152	7,333	102	1.5%	90	1.3%
35 to 44 years..	4,638	4,902	5,214	5,574	156	3.4%	180	3.5%
45 to 54 years..	4,222	4,039	3,956	3,949	- 45	-1.1%	- 3	- .1%
55 to 64 years..	3,986	3,978	3,955	3,902	- 14	- .4%	- 26	- .7%
65 to 74 years..	2,705	2,816	2,904	2,978	45	1.7%	37	1.3%
75 years & over.	1,788	1,883	1,965	2,048	43	2.4%	41	2.1%

SOURCE: U.S. Dept. of Commerce (Bureau of the Census), State Population and Household Estimates, with Age, Sex, and Components of Change: 1981-86 (Current Population Reports, Series P-25, No. 1010). September 1987.

Although Sun Belt retirement centers have best symbolized the aging populations for decades, the aging phenomena has become noticeable in farm areas, in suburbs, and in new Northern retirement communities. The elderly are moving out of cities into rural areas outside the traditional Sun Belt retirement centers. The region with the highest percentage of the population 65 or over encompasses the north central farm states.

Ethnic diversity is especially reflected within this population age structure -- in particular, among young people and retirement-age groups. A higher proportion of young people and a lower proportion of retirement-age persons are from ethnic-minority groups.

II. EDUCATION

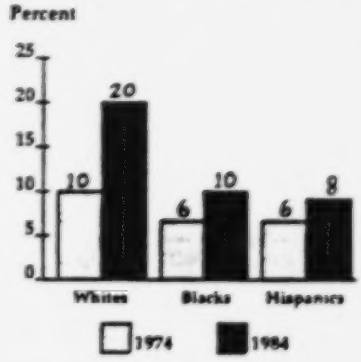
The educational levels of most Americans will continue to rise slowly, but the disparities between levels of education of those "at-risk" (i.e., urban and rural disadvantaged, especially among Blacks, Hispanics and Native Americans as compared with Whites and Asian Americans) are expected to remain large. Educational achievement levels in the North Central U.S. rank below those of the Nation. This will have deleterious effects on our economy and society. There will be a continuation in the higher proportions of at-risk youth who experience lower academic successes and higher drop-out rates from high school for a variety of reasons. The poor will face even greater obstacles (both academic and financial) in participating successfully in post-secondary vocational training or college-level education programs; this applies to at-risk adults as well as youth. Of more and more importance to every worker is the acquisition of a sound educational foundation and good personal attributes necessary to get a good job, and in order to be (re)trained and upgraded as changes occur, with the least cost to employers in terms of time, money and other resources.

A. Educational Attainment

With the rapidly increasing ethnic-minority populations, there is growing concern about the relatively low educational level that has been achieved by adults. Except for Asian Americans (who tend to be well-educated), ethnic-minority adults tend to be much less-well educated than White adults. This is especially true for Spanish persons and Native Americans.

Of the 132.8 million adults 25 years of age or older in the United States in 1980, almost one-third had obtained at least one year of post-high-school education. However, much higher percentages of Whites and Asian Americans obtained at least one year of higher education than did Hispanics, Blacks or Native Americans (see Table 4 and histogram).

U.S. Adults with College Degrees



Source: Bureau of Census, "Population Profile of the United States, 1983/84," and unpublished data. Based on adults 25 years and older.

April 1986

TABLE 4

HIGHEST EDUCATIONAL LEVEL ATTAINED BY ADULTS (≥ 25 YRS.) BY ETHNIC GROUP: 1980

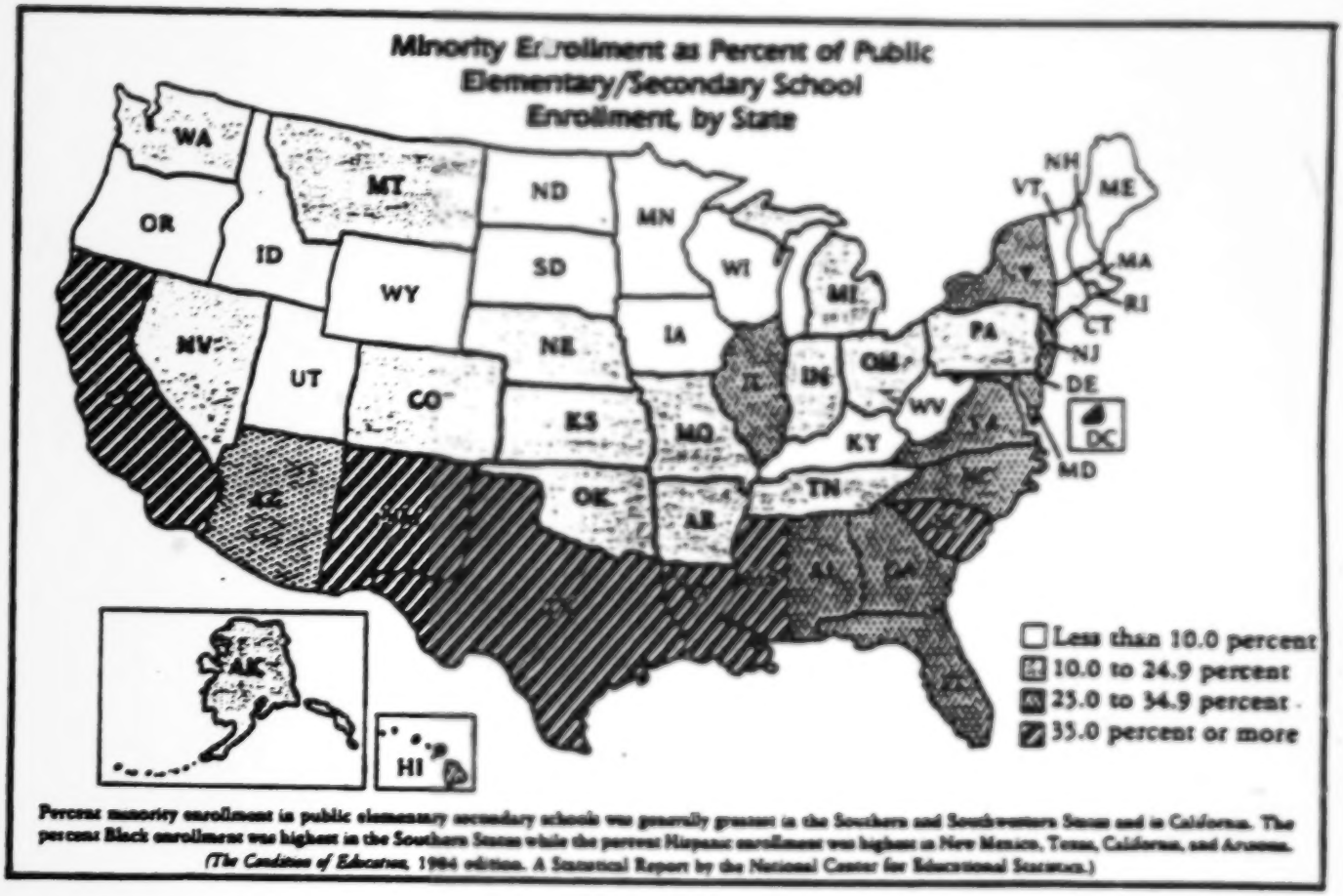
	United States					North Central Region				
	Elem.	High School		College		Elem.	High School		College	
	0 - 8	1 - 3	4	1 - 3	4+	0 - 8	1 - 3	4	1 - 3	4+
Total	18.3%	15.3%	34.6%	15.7%	16.2%	17.1%	14.9%	38.6%	14.7%	14.7%
White	16.6	14.6	35.7	16.0	17.1	16.5	14.2	39.5	14.6	15.2
Black	27.0	21.8	29.3	13.5	8.4	21.3	23.8	31.4	15.6	7.9
Hispanic	45.7	16.4	22.0	10.4	5.5	46.2	16.3	22.0	9.4	6.1
Native Amer.	25.0	19.5	31.3	16.5	7.7	22.2	23.0	33.2	15.1	6.5
Asian Amer.	16.4	8.8	24.7	17.2	32.9	12.9	7.3	18.2	14.6	46.9

Source: 1980 U.S. Census Reports.

B. Educational Enrollment

Because ethnic-minority persons have a higher rate of population increase than the population as a whole, the representation of Minorities in public elementary and secondary schools is also greatly increasing. Minority representation is heightened by decreasing White enrollment. Minority representation in public elementary and secondary schools is already high in certain places, as shown in Map 2. Every one of the 25 largest public-school systems in the U.S. now has a "Minority majority" of students. For example, in 1982, Minority representation in Chicago was nearly 84 percent; in Detroit it was 89 percent; Philadelphia was 73 percent; Cleveland was 74 percent; and St. Louis was 80 percent. It is already over 50 percent in Indianapolis and growing.

MAP 2



Percent minority enrollment in public elementary secondary schools was generally greatest in the Southern and Southwestern States and in California. The percent Black enrollment was highest in the Southern States while the percent Hispanic enrollment was highest in New Mexico, Texas, California, and Arizona.
(The Condition of Education, 1984 edition. A Statistical Report by the National Center for Educational Statistics.)

The table below clearly reflects the ever-decreasing numbers of youth in total Great Lakes public-school enrollments between 1983-84 and 1986-87. Meanwhile, the total U.S. public-school enrollments increased at the elementary level, but declined at the secondary-school level. Specifically, in 1986-87 total U.S. public elementary and secondary enrollment was 39.8 million, an increase of almost 380,000 (or 1%) over 1983. In sharp contrast, the Great Lakes states lost 171,700, or 2.4 percent. In general, the greatest losses came for secondary schools.

Losses for elementary schools tended to be much lower. In some states, enrollment increases were experienced, as in the U.S. in general and in Wisconsin of the Great Lakes area. In addition, Indiana and Ohio experienced increases in elementary-school enrollment between 1985 and 1986. This elementary-school enrollment increase probably reflects the mini baby boom beginning to move its way into the educational system.

TABLE 5

ESTIMATED FALL PUBLIC-SCHOOL ENROLLMENT IN GREAT LAKES STATES: 1983-84 - 1986-87

(NUMBERS IN THOUSANDS)

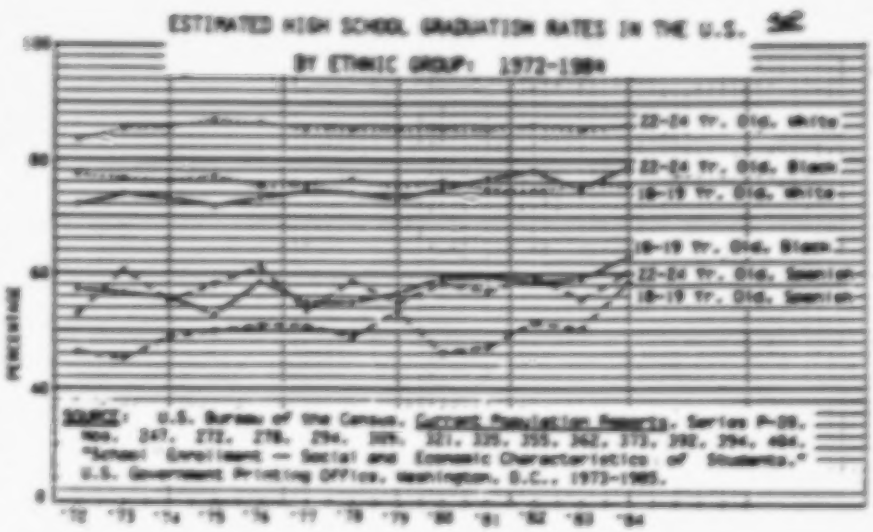
	(Revised) 1983-84	1984-85	(Revised) 1985-86	1986-87	1983 - 1986 Change Number	Percent
ELEMENTARY SCHOOL						
TOTAL UNITED STATES	23,716.6	23,770.9	23,960.2	24,360.2	643.6	2.7%
Total Great Lakes..	4,483.9	4,472.6	4,398.6	4,410.5	-73.4	-1.6%
Illinois.....	1,271.5	1,266.9	1,246.5	1,244.7	-26.8	-2.1%
Indiana.....	511.4	505.8	505.8	510.8	- .6	- .1%
Michigan.....	1,132.7	1,140.0	1,093.4	1,093.3	-39.4	-3.5%
Ohio.....	1,121.4	1,108.4	1,094.7	1,102.0	-19.4	-1.7%
Wisconsin.....	446.8	451.5	458.1	459.6	12.8	2.9%
SECONDARY SCHOOL						
TOTAL UNITED STATES	15,704.1	15,602.6	15,569.7	15,440.4	-263.7	-1.7%
Total Great Lakes..	2,687.3	2,655.0	2,633.5	2,589.0	-98.3	-3.7%
Illinois.....	577.5	570.1	580.0	555.5	-22.0	-3.8%
Indiana.....	472.8	468.1	460.2	452.9	-19.9	-4.2%
Michigan.....	603.2	603.0	583.9	583.7	-19.5	-3.2%
Ohio.....	705.9	697.7	699.3	688.9	-17.0	-2.4%
Wisconsin.....	327.8	316.1	310.1	308.0	-19.8	-6.1%
TOTAL, ELEMENTARY AND SECONDARY						
TOTAL UNITED STATES	39,420.7	39,373.5	39,529.9	39,800.6	379.9	1.0%
Total Great Lakes..	7,171.2	7,127.6	7,032.1	6,999.5	-171.7	-2.4%
Illinois.....	1,849.0	1,837.1	1,826.5	1,800.2	-48.8	-2.6%
Indiana.....	984.3	973.9	966.1	963.7	-20.6	-2.1%
Michigan.....	1,735.9	1,743.0	1,677.3	1,677.0	-58.9	-3.4%
Ohio.....	1,827.3	1,806.1	1,794.0	1,790.9	-36.4	-2.0%
Wisconsin.....	774.6	767.5	768.2	767.6	- 7.0	- .9%

SOURCE: National Education Association, Estimates of School Statistics: 1986-87 and 1986-87, 1985 & 1987. C/o NEA Professional Library, P.O. Box 509, West Haven, CT 06516.

Of special concern with an increasing proportion of ethnic-minority public school students are their lower graduation rates and higher secondary education dropout rates. Although the graduation rates of Black and Spanish persons seem to have improved slightly since the mid-1970s, these groups are still well below the rate for White students (see Figure 1).

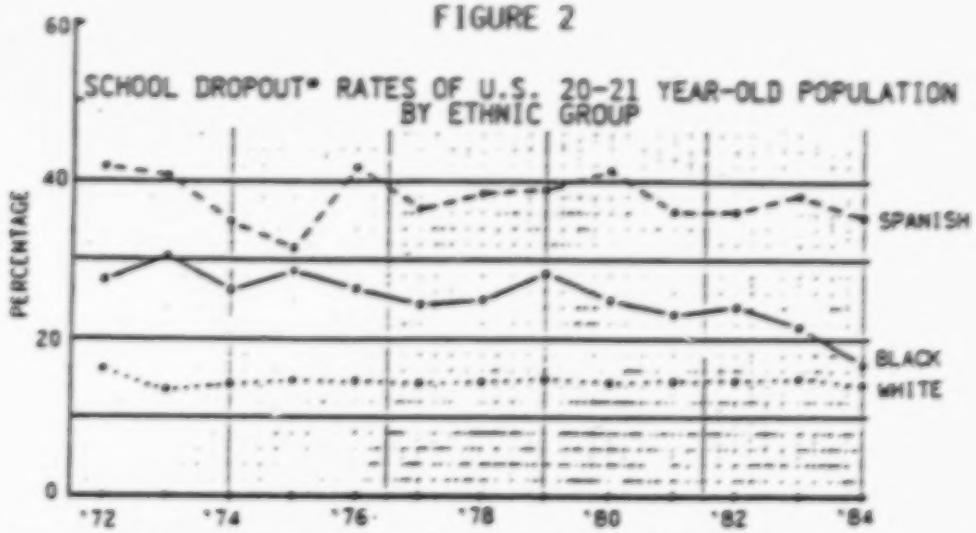
Also, there is the tendency for a higher proportion of Blacks than of Whites or Spanish persons to graduate at an older age than the typical age of 17 or 18, which is commonly used in definitions of graduation and dropout rates. Thus, approximately 15 percent of Blacks graduate from high school beyond the typical age, compared with 10 percent of Whites.

FIGURE 1


ESTIMATED HIGH SCHOOL GRADUATION RATES IN THE U.S.
BY ETHNIC GROUP: 1972-1984
22-24 Yr. Old, White
22-24 Yr. Old, Black
18-19 Yr. Old, White
18-19 Yr. Old, Black
22-24 Yr. Old, Spanish
18-19 Yr. Old, Spanish
PERCENTAGE
'72 '73 '74 '75 '76 '77 '78 '79 '80 '81 '82 '83 '84

Almost the reverse image of graduation rates are dropout or noncompletion rates (depending upon definitions). According to the 1980 Census, noncompletion of secondary school is very high for Hispanic students, as well as for Black and Native American students. The stark ethnic-group differences are evident in Figure 2, which also shows a slight decline in dropout rates for Blacks. Dropout rates for Native Americans tend to be the highest.

FIGURE 2



* Not H.S. graduate and not enrolled in school.

SOURCE: U.S. Bureau of the Census, Current Population Reports, Series P-20, Nos. 247, 272, 278, 294, 309, 321, 325, 355, 362, 373, 392, 394, 404, "School Enrollment -- Social and Economic Characteristics of Students," U.S. Government Printing Office, Washington, D.C., 1973-1985.

According to information from the National Center for Education Statistics (see Table 6), dropout rates are higher for minorities (especially Native Americans) and students from low (or "unknown") socio-economic backgrounds, from urban areas, from the west and the south (also high-minority areas), from vocational/technical and general high-school programs, and with average or (especially) lower self-reported grades in school.

TABLE 6

STUDENTS (SUPHOMORES IN 1980) WHO DROPPED OUT BEFORE GRADUATION BY SELECTED BACKGROUND VARIABLES

	Percent		Percent
Race/ethnicity:		**Geographic Region:**	
Native American	29.2	Northeast	11.3
Hispanic	18.0	North Central	12.0
Black	17.0	South	15.2
White	12.2	West	16.6
Asian American	3.1	**High School Program:**	
Socio-economic Status:		Academic	4.0
High	5.2	General	12.9
Middle	9.0	Vocational-technical	15.1
Low	17.4	**Self-reported Grade:**	
Unknown	31.6	Mostly A's	2.9
Community Type:		Mostly B's	8.1
Urban	18.9	Mostly C's	18.5
Suburban	11.8	Mostly D's	42.5
Rural	12.8	**All Students**	13.6

Source: High School and Beyond, NCES 83-2780, National Center for Education Statistics, U.S. Department of Education.
Reported by Samuel S. Peng, High School Dropouts: A National Concern. Prepared for the Business Advisory Commission, Education Commission of the States, March 1985, p.8.

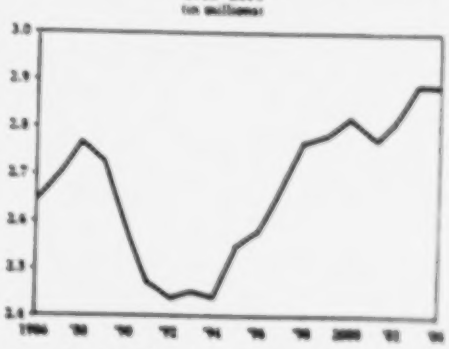
The costs of dropping out of school can be very high, both to the individual and to society in general (see Attachment XIV: e.g., higher unemployment rates, relegation to lower-pay jobs, lower productivity, lower tax revenue, greater dependence upon social-assistance programs, higher crime rates, higher health-care costs, and greater tendency for children to be disadvantaged, perpetuating the process.

In addition to graduation and dropout rates, a high school education issue that is often overlooked or ignored is that of holding students back one or more grade levels rather than promoting them. This is also especially important to the present study because minority students (except for Asian Americans as a group) are more likely to be held back rather than being promoted to the next grade along with their class. This is especially true with Black and Spanish students.

Nationally, the 1979 peak of 3 million high-school graduates was followed by steady decreases until a short-term bottom was reached in 1986 (2.65 million graduates). A short, modest upturn since 1986 will culminate with 1988 graduates (2.77 million) and be followed by a rather steep decline of 12 percent until 1992 (with 2.44 million graduates). Major increases are then expected, continuing into the next century to levels exceeding the 1988 peak, with 2.89 million graduates in 2004. Among public high schools, the number of projected public-school graduates in 2004 is expected to be only 4.3 percent below the 1979 historical peak. Private-school projections, however, are much less optimistic. (See Figure 3.)

FIGURE 3

Projected Number of U.S. High School Graduates, 1986–2004
(in millions)



Source: "High School Graduates: Projections by State, 1986 to 2004," a joint publication of the Western Interstate Commission for Higher Education (WICHE), The College Board, and the Teachers Insurance and Annuity Association. (Available from WICHE, P.O. Drawer P, Boulder, CO 80301-9752; order publication #3431.) It is prepared.

As with population changes, graduation estimates are expected to vary greatly across regions and states and with respect to ethnic-group composition. **Northeastern** states will continue to experience substantial decreases in numbers of high-school graduates (except for Maryland, New Hampshire, and Vermont which are expected to have more graduates by 2004). This region as a whole will have 5 percent fewer graduates in 2004 than the 1986 bottom. **Northcentral** states will all experience decreases in their graduate counts until 1992, followed by a slow recovery but still having 9 percent fewer graduates in 2004 than in 1986. Only Kansas, Minnesota and Missouri will have graduate numbers that match or slightly exceed their 1986 counts. **South** and **Southcentral** states as a whole will graduate 16 percent more students in 2004 than in 1986, with intermittent changes varying state by state. Of the 14 states, seven will have more graduates in 2004 than in 1986 (led by Florida's projected 60% increase), and seven will have fewer graduates (led by West Virginia's 31% drop). **Western** states will experience less severe decreases in the early 1990's, with the number of graduates expected to exceed those in the Northeastern and Northcentral states by 2004, graduating 44 percent more students in 2004 than in 1986. There will again be variations among Western states. For example, Alaska and Nevada will double their number of 1986 graduates, while Idaho and Wyoming will be among the states with the greatest declines between 1986 and 2004.

MAP 3

PROJECTED CHANGES IN GRADUATES, BY STATE, FROM 1981 TO 2000

Source: Western Interstate Commission for Higher Education. From Harold L. Hodgkinson, "Demographics and the Economy: Understanding a Changing Marketplace," The Admissions Strategist, Jan 1985, p.3.

In contrast to overall declines in the number of high-school graduates, the number of graduating high-school Minority students has been increasing, both numerically and proportionately (especially among Blacks). Even so, in 1987, he proportion of Hispanics 25 years old and older with at least a high-school diploma was only 50.9 percent, well below the rates for other ethnic groups, but up markedly from the 45.4 percent of 1982.

The college enrollment of White high-school graduates has been increasing slightly numerically and proportionately, while Minority enrollment also increased but peaked in 1980 and has since declined, especially for Black high- school graduates. For the typical recent high-school graduation age group, approximately 40 percent of Whites have been enrolled, compared with only 25 percent of Blacks and Spanish persons. However, a much higher proportion of Blacks and Spanish persons remain in secondary school past the typical age of high school graduation. These higher holdback rates are also reflected in college enrollment rates for 20-21 year olds, in which case, while White enrollment declines five percent from the previous age period, the enrollment rate of Blacks and Spanish persons remains almost constant. This would thus suggest a higher average college age for Blacks and Spanish persons than for Whites.

Minority enrollment in higher education by States, as reported in The Chronicle of Higher Education, are shown on Map 4. Although there is a relationship between these percentages and their population percentage counterparts, in general, Minorities are underrepresented in higher education institutions.

MAP 4

PERCENT MINORITY ENROLLMENT* IN COLLEGES AND UNIVERSITIES BY STATE: 1984

* Including foreign students

SOURCE: "Fact-File" The Chronicle of Higher Education, July 31, 1985, p. 31

USA SNAPSHOTS USA TODAY 10 April 86
A look at statistics that shape the nation
Blacks in college
Today's National Conference on Blacks in Higher Education will look at ways to boost enrollment. Blacks — 13.8 percent of all USA adults aged 18-24 — make up only 8.5 percent of students in colleges and universities.
College and university students who are black
1976-77
1978-79
1980-81
1982-83
1984-85
Source: Department of Education
By Jae Reeves, USA TODAY

National college enrollment has been projected to decline until approximately 1994 due to aging of the Baby Boom generation. Minorities are becoming increasingly underrepresented in postsecondary education, except for Asian Americans. Of special concern is that both Blacks and Hispanics lose more ground relative to other ethnic groups at each higher level of the educational process.

The next crisis in American public education will be a shortage of Minority teachers who can inspire Minority students in urban areas to perform as well as their peers in affluent suburbs.

Minority students never will be able to perform as well as white students in the suburbs of the country unless parents get involved with their children's education. And as the Minority student population grows in urban areas, there will be a need for more Minority teachers to be role models for those students.

BLACK TEACHERS

% of All Teachers

1970	1981	1986	2000
12%	8%	7%	5%

In all, colleges are expected to prepare 978,000 teaching graduates to meet a demand for 1.3 million over the next six years. The outlook is especially grim for Minority recruitment. Black students constitute 16 percent of public-school enrollment, but the number of Black teachers is expected to drop to 5 percent of the work force by 1990.

C. STUDENT ACADEMIC PREPARATION

The past fifteen years has been a period of change and turmoil in American education. The social and educational reforms of the late 1960s and early 1970s were followed first by the back-to-basics movement and, later, by the reaffirmation of traditional academic goals as the central focus of schooling. The trends in reading proficiency between 1971 and 1984 suggest that these broad movements have indeed improved student achievement.[1/]

While student test scores in the basic skills have rebounded from a long slide to levels of a decade ago, there remain large gaps in the education of America's children....

- A 1984 National Assessment of Educational Progress study of student writing found a "generally low level of writing proficiency," despite five years of steady improvement.
- In a 1982 U.S. Study of math skills, students performed poorly on problems that required some analysis and ability to sort through information.
- In the latest international study of mathematics, 12th graders in the U.S. scored much lower than Japanese students and well below the mean score of 15 industrialized nations.[2/]

In a major study of access to higher education in 1980,[3/] it has been found that 7 of 10 "high-ability" high-school seniors were still attending college two years after high-school graduation, compared to only one of four "average-ability" seniors. High-ability seniors have also been twice as likely to major in technical fields than average-ability seniors. Moreover, students attending four-year colleges have scored higher on high-school senior-year achievement tests than their two-year-college counterparts. Of special importance to the present report is the observation that Black and Hispanic students were the least represented high-school seniors in the high-ability group.

In an examination of the educational status of Black Americans,[4/] the College Entrance Examination Board observed the following:

- The educational performance of Black students in elementary and secondary schools, as measure by standardized achievement test scores, rose in many areas over the decade of the 1970s, but it remained lower than that of non-Blacks by 1980.
- The strongest gains in mathematics and reading test scores were registered by young Black students, particularly those from urban, disadvantaged communities...
- However, gains in mathematics and science were far less substantial than for reading, and Black 17-year-olds showed stable or declining scores on achievement measures in reading, mathematics, and science.
- Black students of all ages performed better in the area of mathematical knowledge (factual recall) than in the area of mathematical skills (performing computations and manipulations), and least well in the area of mathematical applications (the ability to solve problems and use mathematical reasoning).

There is an approximate 3 to 4-year reading proficiency gap between Black and White students: e.g., 17-year-old Blacks are reading at the proficiency level of 13-year-old Whites. Likewise, 17-year-old students who live in disadvantaged-urban

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1/ National Assessment of Educational Progress. The Reading Report Card: Progress Toward Excellence in our Schools (Report No. 15-R-01). Princeton: Educational Testing Service, 1985.

2/ Lucia Solorano, Dan Collins, Mary Galligan, Steve L. Hawkins, & Sarah Peterson. "Teaching in Trouble", U.S. News & World Report, May 26, 1986, pp. 52-57.

3/ Valerie Lee. Access to Higher Education: The Experience of Blacks, Hispanics and Low Socio-Economic Status Whites. Washington, D.C.: American Council on Education, Div. of Policy Analysis and Research, May 1985.

4/ The College Board. Equality and Excellence: The Educational Status of Black Americans (Draft). New York: The College Entrance Examination Board, Jan. 1985.

communities are reading at a proficiency level of 13-year-old students from advantaged-urban communities.

However, Minority and disadvantaged-urban students experienced marked improvements between 1971 and 1984 in their reading proficiency levels and have narrowed the gap between their performance and that of White and advantaged-urban students. However, these students are in need of still further improvements in that the reading proficiency of Black and disadvantaged-urban students is far below that of White and advantaged-urban students. As suggested by other data, these proficiency deficiencies are probably similar for other abilities or subject areas.

FIGURE 4

Trends in Average Reading Proficiency for White, Black, and Hispanic Students by Year of Birth

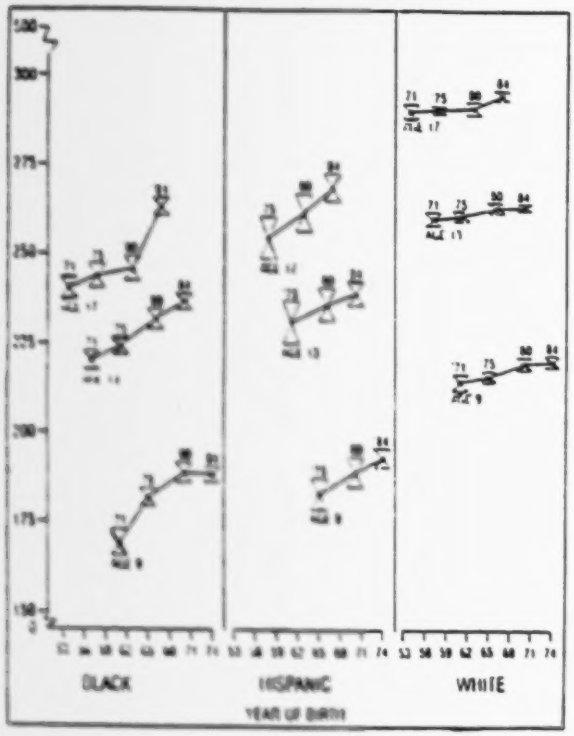
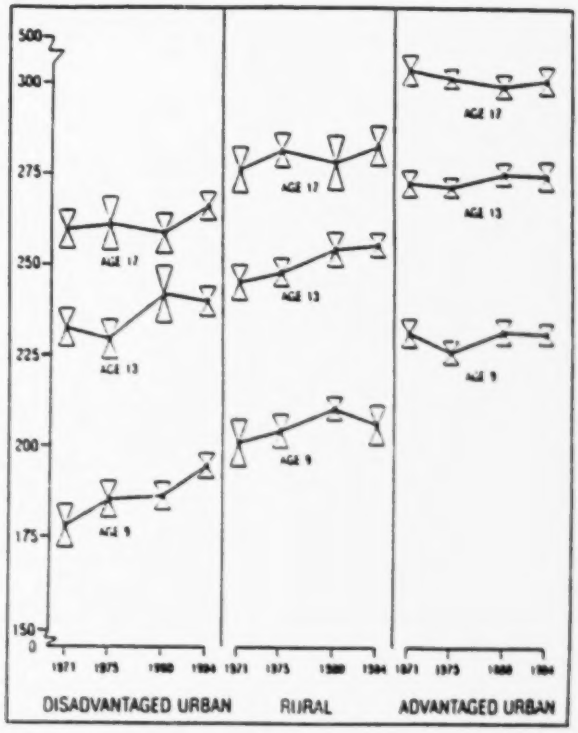


FIGURE 5

Trends in Average Reading Proficiency for Type of Community



= estimated population mean reading proficiency and 95% confidence level. It can be said with 95% certainty that the mean reading proficiency is within this interval.

A comparison of three levels of reading proficiency, according to the National Assessment of Educational Progress*, by age and ethnic group reveals:

- A gradual improvement from 1971 to 1984,
- More White students score higher at all grade levels,
- Lower proportions of students score at each higher level, and
- Only 15 percent of Black and 20 percent of Hispanic (pre-college age) 17-year-olds attain an "adept reading proficiency", as compared to 45 percent of White students.

* Source: National Assessment of Educational Progress, The Reading Report Card: Progress Toward Excellence in Our Schools (Report No. 15-R-01). Princeton: Educational Testing Service, 1985.

Since hitting a low in 1980, scores on the College Entrance Examination Board's Scholastic Aptitude Tests (SATs) have gradually increased through 1987. Although the greatest increases have occurred for Minority students (those who anticipate a college education), Minority scores are still well below those for White students. The exception is Asian Americans, who are comparable to White students. Although students since 1980 have been achieving improved SAT scores, their scores still remain below the peak achieved in 1963. White score means are still slightly below 1976 averages, while score means for Minority groups (especially Blacks, Hispanics, and American Indians) are appreciably higher than their 1976 averages.

In 1987 the highest Math scores were attained by Asian-Americans, followed by White students. Whites had the highest Verbal and total scores, followed by Asian Americans (see Table 7). The total scores of Black students were lowest. In all cases, average Great Lakes' student scores were above those of the U.S. However, appreciable differences in average total scores exist across the Great Lakes states. The lowest score averages are attained in Indiana, while the highest are attained, in general, in Wisconsin or Michigan, depending upon the ethnic group.*

TABLE 7

SAT SCORE COMPARISONS FOR THE U.S. AND GREAT LAKES STATES BY ETHNIC GROUP: 1987

	SAT Total Scores						
	U.S.	G.L.	IL	IN	MI	OH	WI
All STUDENTS	906	943	984	874	972	954	1009
Whites	936	959	999	888	1015	970	1021
MINORITIES:							
Blacks	728	758	807	710	746	767	801
Hispanics:							
Mexican Amer.	803	857	911	786	938	909	817
Puerto Ricans	760	852	882	817	951	852	787
Other Hispanic	819	932	961	868	985	906	904
Amer. Indians	825	827	865	783	880	843	894
Asian-Americans	926	1028	1045	936	1054	1037	996
Other	860	901	928	829	906	915	933
Number of Students taking SAT	1.1m	114,878	24,038	35,265	15,538	30,537	9,500
% of Students Tested	NA	17%	14%	47%	11%	16%	10%

Source: *The College Board.* NA = *Not Available*

Scores of White students on the Scholastic Aptitude Tests are approximately 100 points higher in Math and about 90 points higher in Verbal tests than are Black students' scores. Scores of American Indian and Hispanics are in between, and scores of Asian Americans are the highest of all in Math and second highest in Verbal scores. However, there have been encouraging recent gains by Minorities.

In addition to a good academic preparation, because of increasingly intensive global-international relations, inter-dependence and competition, each person should have a basic understanding of the economic, social and political systems (locally, nationally and worldwide).

* *Note: The higher the proportion of students that take the test, the lower the score distributions and averages tend to be.*

D. Reasons For Attending A Particular College

A survey in 1986 of 1,400 Indiana high-school seniors examined their reasons for planning to attend a particular college. The rank order of their responses is the same as a survey of some 40,000 high-school seniors in Indiana in 1975.

(Most Important Reason Only)

Rank Order	Reason	Percent Respondents
1	Offers what I want to study	48.9%
2	Location is near home	12.8%
3	Academic reputation of school	12.5%
4	Low Tuition & Financial Aid Available	8.5%
5+	All other reasons	17.3%
		100 %

The implications are clear: Courses and programs must be identified that are wanted, and they should be offered in local communities and be of high quality and low cost with financial aid available.

E. Some Good Reasons For Adults To Continue Their Education

Studies and examination of data reveal that the time and money spent on education is a good investment. The Higher One's Education Level:

- The lower the unemployment rates,
- The higher the salary/wage and fringe benefits,
- The better the career progression,
- The easier to retrain or upgrade, and
- The better the chance to take advantage of opportunities.

Also, there are other important benefits difficult to assess: e.g., enhance ability to appreciate, maturation of value structure, increase in communicative skills, intellectual development, raise self-confidence, and more.

In a study by Dr. Robert Haveman, University of Wisconsin-Madison, he reported that additional education is directly related to benefits beyond higher salaries and employment. These benefits included:

- Educated people are healthier.
- Children of better-educated people do better in school.
- Contraceptive use and family planning are related to years of education.
- Educated people are smarter consumers.
- Criminal behavior is less likely and charitable giving is more common.

He stated that these benefits add up to several thousand dollars each year of education. When this is added to the higher salaries that college graduates earn, the result reflects a more comprehensive value of a university degree.

III. SOCIO-ECONOMIC TRENDS

Average SAT scores are positively related to parental income and contribution. Note that the higher the family income, the higher the mean SAT score, regardless of race. Also note that average scores for the Black Highest-income group are lower than average scores for the White lowest-income group.

TABLE 8

MEDIAN SAT SCORES BY RACE AND FAMILY INCOME, 1985

	Black Students			White Students			All Students		
Family Income	Total	Verbal	Math	Total	Verbal	Math	Total	Verbal	Math
Under $6,000.....	12.9%	298	330	1.8%	415	450	3.6%	350	395
$6,000-$11,999...	21.0%	310	340	5.4%	420	452	7.9%	376	418
$12,000-$17,999..	18.9%	327	351	8.6%	424	459	10.2%	398	439
$18,000-$23,999..	14.8%	340	366	11.6%	429	468	12.1%	413	453
$24,000-$29,999..	9.2%	351	376	12.2%	434	478	11.7%	427	469
$30,000-$39,999..	10.6%	361	381	20.1%	440	488	18.6%	434	482
$40,000-$49,999..	6.4%	378	397	14.7%	450	500	13.4%	446	496
$50,000 and over.	6.3%	407	430	25.6%	467	519	22.6%	465	517

Source: *The College Board*

The lower the SAT average scores, the lower parental contribution toward higher education tends to be. Conversely, higher parental contribution is associated with higher SAT average scores.

It is important to remember here that Blacks and Hispanics, compared with Whites, have lower average SAT scores, lower median parental contribution, and lower median parental income.

TABLE 9

PERCENT OF U.S. COLLEGE-BOUND STUDENTS IN SAT AVERAGE SCORE INTERVALS BY ESTIMATED PARENTAL CONTRIBUTION TO HIGHER EDUCATION: 1985

	SAT AVERAGE			
Parental Contribution	Below 400	400-499	500-599	600 or Over
$0	31.0%	18.6%	13.7%	9.9%
$1-999	18.5	16.8	14.4	11.4
$1000-1999	13.4	14.3	13.5	11.8
$2000-2999	8.4	9.8	10.0	9.3
$3000-3999	5.9	7.3	7.7	7.5
$4000-4999	3.6	5.1	5.9	6.4
$5000-5999	4.4	5.5	6.2	6.8
$6000-7999	5.9	9.0	11.1	13.8
$8000 & Over	8.9	13.5	17.4	23.1
Median Contrib.	$1007	$2060	$2841	$4054

TABLE 10

MEDIAN INCOME LEVELS FOR U.S. AND MIDWEST FAMILIES: 1979, 1981, 1983, 1985

	U.S.		Midwest	
	White	Minority	White	Minority
Per Capita Income,				
1980 Census.....	$ 7,929	$ 4,761	$ 7,825	$ 4,875
Family Income:				
1980 Census (1979)..	$20,835	$14,446	$21,462	$16,113
1981 Coll-Bound Sen.	26,000	16,411	28,500	21,023
1983 Coll-Bound Sen.	31,200	20,361	33,200	25,865
1985 Coll-Bound Sen.	34,700	22,843	36,300	26,077

Sources: *1980 Census Reports; College Board College-Bound Seniors.*

The low median-income levels of Blacks and Hispanics results from their concentration in occupations which require low skill levels. Income differences are also attributable to such characteristics as educational level, language fluency, time in the U.S., work experience, age, military experience, health and government employment.

According to self-reports of students, the income of Whites was significantly higher than that of Minorities for the U.S. and the Midwest (see Table 11). Median parental income was especially low for Blacks (U.S., Midwest and Indiana); 30 to 34 percent of Blacks had income less than $12,000, compared to less than 10 percent of Whites.

Financial contribution to education of Whites was expected to be significantly higher than that of Minorities for U.S. and Midwest students. Contributions would be especially low for Black students (i.e., almost nonexistent). Contributions would also be low for Hispanic students.

The ratio of estimated contributions to income were significantly lower for Blacks and Hispanics than for Whites -- but especially for Blacks. The Midwest ratio was higher than the U.S. ratio.

Plans for requesting part-time work varied between 35 and 55 percent of the students across ethnic groups and geographical areas. Black and Hispanic students tended to desire part-time work to a greater extent than the other ethnic groups. Thus, in general, Minorities are in special need of financial aid for higher education.

TABLE 11

FINANCIAL STATUS OF COLLEGE-BOUND HIGH-SCHOOL SENIORS FOR THE UNITED STATES AND THE MIDWEST: 1985

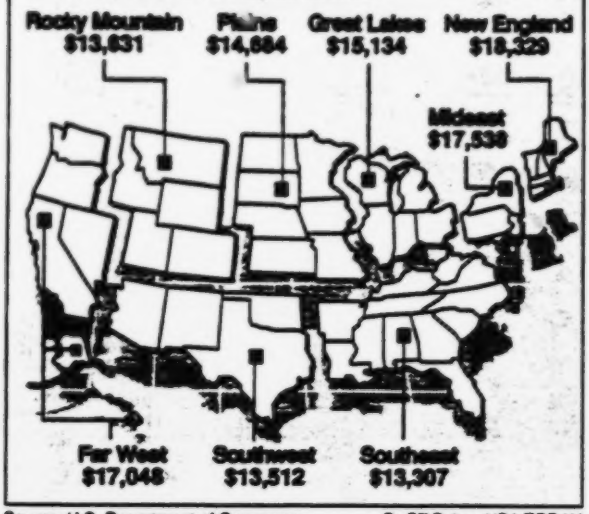
	Geo. Area	White	Black	Hispanic	Oriental American
Ethnic representation of respondents to College Boards's ATP Student Descriptive Questionnaire	U.S.	75.7%	8.4%	3.2%	4.5%
	MW	85.6	6.7	1.0	2.3
Median parental income	U.S.	$34,700	$17,100	$19,378	$26,400
	MW	36,300	19,900	26,325	38,300
Percent with parental income ≥ $30,000	U.S.	60.4%	23.3%	28.8%	44.4%
	MW	64.4	29.7	39.7	63.5
Percent with parental income < $12,000	U.S.	7.2%	33.9%	28.3%	20.6%
	MW	6.0	29.5	17.0	11.1
Median parental contribution	U.S.	$2,590	$0	$166	1,020
	MW	2,790	380	986	2,880
Ratio of median parental contribution to income	U.S.	7.5%	0.0%	0.9%	3.9%
	MW	7.7	1.9	3.7	7.5
Percent Planning to Seek Part-time work	U.S.	38.0%	50.4%	44.0%	39.3%
	MW	40.1	54.8	51.3	39.6

Sources: College-Bound Seniors, 1985: National and Midwestern Reports, College Board, Admissions Testing Program, 1985.

U.S. - United States, MW - Midwest

Northeast remains on top

The Northeast maintained the highest per capita income, and also scored the largest gains in income. New England incomes went up 6.7 percent between 1986 and 1987 while the Mideast states rose 6 percent. No other regional income gained by more than 4.8 percent. Per capita income:



Source: U.S. Department of Commerce By Bill Baker, USA TODAY

USA TODAY, April 21, 1988, pp.1,6.

Per-capita income increases are slowing due to (a) decreasing earnings in finance, retail trade, services and construction, according to the U. S. Department of Commerce, (b) continuing decline of high-paid manufacturing jobs, and (c) growth in lower-pay service jobs.

Differences in regional income levels are again widening after converging for more than 50 years. Recent estimates by the Bureau of Economic Analysis concerning per-capita income changes between 1979 and 1986 indicate that

- the **Great Lakes** and **Plains** states lagged behind the nation as a whole, increasing 6.4 percent and 6.6 percent, respectively, compared to 7.1 percent nationally. The causes include stagnation in the areas' traditional manufacturing base and low population growth coupled with population out-migration, which reduces consumer demand. [Although agricultural-residence population has continued to decline (to 4.99 million in 1987), more than half (2.53 million) are still located in the Midwest states.]
- Per-capita income in **New England** and the **Middle Atlantic** states pulled ahead of the rest of the country (9% and 8%, respectively) despite slow population growth.
- In the **Southwest** and **Far West**, although total personal income has risen at a rate comparable to that in the Northeast, because the population has been growing twice as fast as the nation in general, per-capita income is rising more slowly.

Per capita income rises

Per capita income in the USA increased by 4.8 percent between 1986 and 1987. State-by-state breakdown with income, one-year change and USA rank:

State	Per capita income	Change 1986-87	USA rank
Alabama	$11,780	4.0%	44
Alaska	17,866	-0.7%	5
Arizona	14,030	2.9%	29
Arkansas	11,343	2.7%	47
California	17,661	4.7%	7
Colorado	15,862	4.1%	13
Connecticut	20,980	6.9%	1
Delaware	16,238	5.1%	11
D.C.	20,303	6.5%	–
Florida	15,241	4.3%	19
Georgia	14,098	4.7%	27
Hawaii	15,366	5.1%	16
Idaho	11,820	5.3%	43
Illinois	16,347	5.2%	9
Indiana	13,834	5.3%	31
Iowa	14,191	6.1%	26
Kansas	14,952	3.2%	21
Kentucky	11,950	5.4%	41
Louisiana	11,362	1.5%	46
Maine	13,720	7.3%	33
Maryland	17,722	5.1%	6
Massachusetts	18,926	7.2%	3
Michigan	15,330	3.5%	18
Minnesota	15,783	5.3%	14
Mississippi	10,204	5.2%	50
Missouri	14,537	4.4%	24
Montana	12,255	3.5%	40
Nebraska	14,341	4.5%	25
Nevada	15,958	3.8%	12
New Hampshire	17,133	5.0%	8
New Jersey	20,067	6.4%	2
New Mexico	11,673	2.1%	45
New York	18,055	6.5%	4
North Carolina	13,155	5.8%	34
North Dakota	13,061	4.9%	35
Ohio	14,543	4.6%	23
Oklahoma	12,520	1.6%	38
Oregon	13,887	4.2%	30
Pennsylvania	14,997	5.3%	20
Rhode Island	15,355	5.4%	17
South Carolina	11,858	5.2%	42
South Dakota	12,511	5.9%	39
Tennessee	12,738	6.1%	37
Texas	13,764	2.1%	32
Utah	11,246	2.3%	48
Vermont	14,061	5.4%	28
Virginia	16,322	5.6%	10
Washington	15,444	3.1%	15
West Virginia	10,959	4.1%	49
Wisconsin	14,659	4.8%	22
Wyoming	12,759	-0.1%	36
USA	**$15,340**	**4.8%**	–

Source: U.S. Department of Commerce

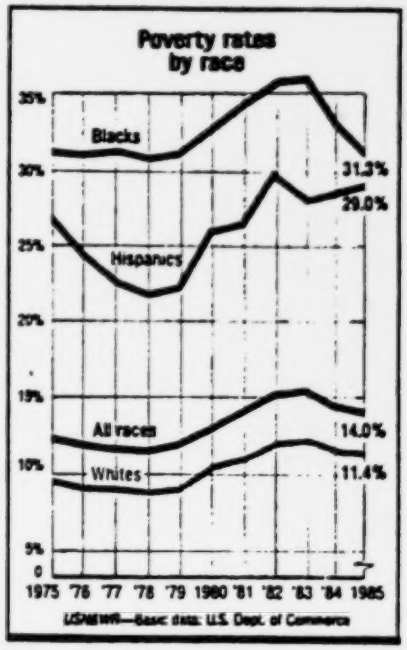
- **Rocky Mountain** states, beset by problems in agriculture and the oil industry, have experienced below-average gains in both total personal income and per-capita income, even while their population growth rate has exceeded the national growth rate.

From 1986 to 1987, the per-capita income continued to increase but at a slower pace. However, only 13 states had per-capita income **growth** greater than during the previous year -- half in the Southwest and Rocky Mountain States -- because of slowing population growth and pickups in manufacturing.

The percentage of people in poverty varies conconsiderably across ethnic groups. Since 1970, approximately one in three Blacks has lived with an income below the poverty level (see Figure 6). Although the percentage of all U.S. people living below poverty level decreased during 1984 and 1985 (including Blacks), the percentage of His panics actually increased slightly, bucking the trend.

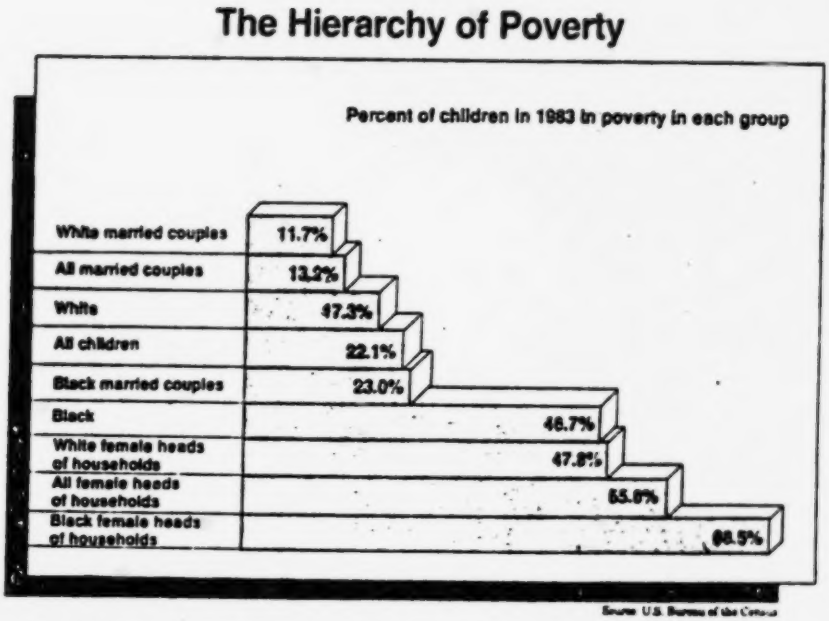
Any family of four earning less than $10,609 in 1984 was considered poor. In the U.S. in 1984, 11.5 percent of Whites were below poverty level, as were 33.8 percent of Blacks and 28.4 percent of Hispanics. However, in 1985 these poverty rates declined to 11.4 percent for Whites and 31.3 percent for Blacks but increased to 29.0 percent for Hispanics.

FIGURE 6



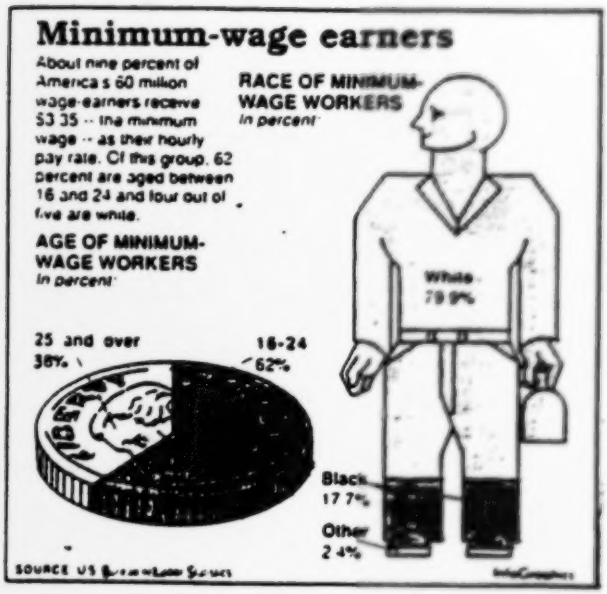
Source: "1985 Winners and Losers: Progress and Poverty," U.S. News & World Report, Sept. 8, 1986, pp.8-9.

FIGURE 7



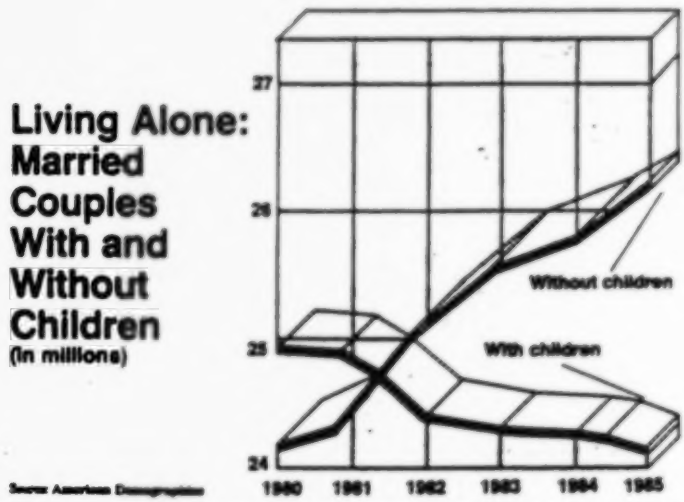
Source: "Here They Come, Ready or Not," Education Week (Special Report), May 14, 1986, Vol.V (No.34), pp.27.

About one in four American children lives in poverty; they are the largest group of impoverished Americans. More than half the children living in households headed by single women are poor. A Black child is about three times as likely as a White child to be born into poverty; a Hispanic child is more than twice as likely to be poor (see Figure 7).


Minimum-wage earners
About nine percent of America's 60 million wage-earners receive $3.35 -- the minimum wage -- as their hourly pay rate. Of this group, 62 percent are aged between 16 and 24 and four out of five are white.
AGE OF MINIMUM-WAGE WORKERS
In percent
25 and over
38%
16-24
62%
RACE OF MINIMUM-WAGE WORKERS
In percent
White
79.9%
Black
17.7%
Other
2.4%

It has finally become generally accepted that family breakdown is now the primary force causing poverty in the U.S. That is, the major factor creating poverty in recent years has been the decline of the two-parent family. The pace of domestic decay accelerated between 1965 and 1986, especially during the last seven years. Over half of all officially poor families are now female-headed -- the families with the largest income shortfalls, the longest stays below the poverty line, and the heaviest demand for public assistance.

According to the National Center for Health Statistics, fewer couples are marrying -- 18,380 (3.0%) fewer in 1985 than in 1984. However, the decline largely reflects major drops in New York (-23.4%), Michigan (-30.7%), Missouri (-21.5%), Tennessee (-19.3%), Massachusetts (-15.6%), Georgia (-7.4%), Pennsylvania (-7.9%), Illinois (-5.7%), Louisiana (-8.9%), South Carolina (-6.5%), and Iowa (-16.1%). In contrast, major increases in marriages were experienced in Texas (9.9%), Florida (9.9%), Kentucky (31.3%), Arizona (34.9%), New Jersey (14.8%), Virginia (10.0%), and Oregon (22.0%). To some extent, these changes reflect the shifting population. In addition, while fewer couples are marrying, an increasing number and proportion of married couples are choosing to not have children.



Source: "Here They Come, Ready or Not," Education Week (Special Report), May 14, 1986, Vol.5 (No.34), pp.13-37.

While the number of marriages is declining, the number of households is increasing, but the size per household or family is continuing to decline. After remaining around 3.6 persons until about 1970, the average-family size in the 1970s began dropping and was 3.3 in 1980. It is expected to continue to decline to an average of 3.0 in 1990. The number of persons per household varies considerably across ethnic groups. Hispanics tend to have the largest families, and White, the smallest.

There is extensive variation among ethnic groups in household structure and composition. The structure of Black households has changed markedly since 1970. The 1980 U.S. Census found that almost half of the Black households were headed by a female, compared with one-fourth the White households and one-fifth the Asian-American households.

Most Black children in the U.S. do not live in two-parent households. In 1982, only 43 percent lived with two parents, a two percent decrease in two years. Moreover, in 1982 almost half (48%) of all U.S. Black children 18 years of age or younger lived in households below the poverty line, compared to one of six White children. Between 1970 and 1982, female-headed households increased from 28 percent to 41 percent of all Black households.

Finally, in households headed by a female, unemployment rates are much higher for Blacks and Hispanics than for Whites. This is especially problematic because of larger Black and Hispanic households depending upon the mother's income (or welfare). Furthermore, while more than two-thirds of children living in female-headed households received government assistance targeted for the poor in the fourth quarter of 1984, the percentage was even higher (85%) for Black and Hispanic female-headed households.

Two reasons for the increasing numbers of households (with decreasing marriages) are increasing illegitimate births and high divorce rates (although they have leveled off since the late 1970s). The teenager illegitimate-birth rate has increased from 15 percent in 1960 to 54 percent by 1983, and is still increasing. However, although teenage illegitimacy is a growing problem, illegitimacy is a greater problem among adult women. Between 1980 and 1985, the

USA households: more, but smaller

The number of households in the USA increased 8.8 percent from 1980 to 1985 while the population increased 5.4 percent, the Census Bureau estimates in a report released today. The study reports 87.5 million households as of July 1, 1985. Population per household fell to 2.69 from 2.76 (Story, 1A). Households in July 1985 (in thousands), increase from 1980 (in thousands), percent of increase and percent change in population:

State	Households — July '85	Households — Increase 1980-85	Households — Percent increase	Change in population
Ala.	1,438	96	7.2%	+3.3%
Alaska	172	41	31.2%	+29.7%
Ariz.	1,158	201	21.0%	+17.2%
Ark.	873	57	7.0%	+3.2%
Calif.	9,820	1,191	13.8%	+11.4%
Colo.	1,218	157	14.8%	+11.8%
Conn.	1,165	71	6.5%	+2.1%
Del.	227	20	9.8%	+4.6%
D.C.	254	1	0.5%	-2.0%
Fla.	4,512	768	20.5%	+16.6%
Ga.	2,140	268	14.3%	+9.4%
Hawaii	330	36	12.3%	+9.2%
Idaho	349	25	7.8%	+6.4%
Ill.	4,202	157	3.9%	+0.9%
Ind.	2,001	74	3.9%	+0.2%
Iowa	1,071	18	1.7%	-1.0%
Kan.	916	43	5.0%	+3.7%
Ky.	1,338	75	5.9%	+1.8%
La.	1,546	134	9.5%	+6.5%
Maine	428	33	8.2%	+3.5%
Md.	1,590	129	8.8%	+4.2%
Mass.	2,150	118	5.8%	+1.5%
Mich.	3,269	74	2.3%	-1.9%
Minn.	1,533	88	6.1%	+2.9%
Miss.	891	64	7.7%	+3.7%
Mo.	1,882	89	5.0%	+2.3%
Mont.	305	21	7.4%	+5.0%
Neb.	594	22	3.9%	+2.3%
Nev.	375	71	23.3%	+16.9%
N.H.	367	43	13.3%	+6.4%
N.J.	2,723	174	6.8%	+2.7%
N.M.	504	63	14.2%	+11.3%
N.Y.	6,857	317	5.0%	+1.3%
N.C.	2,281	237	11.6%	+6.4%
N.D.	242	14	6.3%	+4.9%
Ohio	3,947	114	3.0%	-0.5%
Okla.	1,237	118	10.6%	+9.1%
Ore.	1,035	43	4.3%	+2.1%
Pa.	4,366	146	3.5%	-0.1%
R.I.	360	22	6.4%	+2.2%
S.C.	1,155	125	12.1%	+7.2%
S.D.	253	11	4.5%	+2.5%
Tenn.	1,750	131	8.1%	+3.7%
Texas	5,801	872	17.7%	+15.0%
Utah	506	57	12.8%	+12.6%
Vt.	195	16	9.1%	+4.6%
Va.	2,063	200	10.7%	+6.7%
Wash.	1,677	136	8.8%	+6.7%
W.Va.	707	20	3.0%	-0.7%
Wis. [4]	1,735	83	5.0%	+1.5%
Wyo.	180	14	8.6%	+8.5%
Total	87,489	7,099	8.8%	+5.4%

Source: U.S. Department of Commerce

number of illegitimate births increased 24 percent. One out of four U.S. children born is illegitimate. This increasing number of illegitimate births is in the face of decreasing overall birth rates, further exacerbating the illegitimacy problem.

Illegitimacy, while increasing rapidly for all economic groups, is especially prevalent among the poor and disadvantaged -- despite increasing abortion rates. These high and increasing illegitimacy rates carry grave risks for those involved and for society:

- Increasing need for welfare assistance (now the majority of unwed mothers and children) together with an average dependency period of nine years and the tendency to not participate (at least effectively) in the labor force,
- Much lower average incomes (poverty level) for those mothers who do work,
- Higher rates of child delinquency and educational problems, and
- An overall difficult and disadvantaged upbringing, perpetuating the cycle of problems.

Because the poverty rate is highest for children of female heads of households, it is also critical for unwed teenage-mother subfamilies. Not only do such subfamilies constitute a marked financial strain on the larger family and its income earners, but they also constitute a potential educational strain on the children themselves, putting the children at risk economically as well.

Teen-age mothers tend to give birth to children who are premature, leading to low birth weight, which increases these infants' chances of major health problems and is a good predictor of major learning difficulties when the child gets to school. About 700,000 babies of the annual cohort of around 3.3 million births are almost assured of being either educationally retarded or "difficult to teach." This group is entering the educational continuum in rapidly increasing numbers.

IV EMPLOYMENT CHARACTERISTICS AND TRENDS

A. Literacy

Any discussion of employment and workers must include those who cannot adequately read (or speak) the English language. Serious problems of illiteracy include the impact on the economy -- (e.g., low job skills, high unemployment, and greater time and expenses of training), as well as societal/political problems, not to mention the anguishing personal feelings and experiences.

Another perspective of the enormity of this problem can be visualized by reflecting on recent estimates that up to 13 percent of the adult population may be illiterate (defined as unable to read at the eighth grade level) and perhaps up to 40 percent are marginally illiterate. Other research points out that some people can "read" at that level but are unable to reason through and apply what they've read. In addition, for years foreigners have fled their countries, many unable to read, write and speak English, and some are illiterate even in their own language!

THE WALL STREET JOURNAL

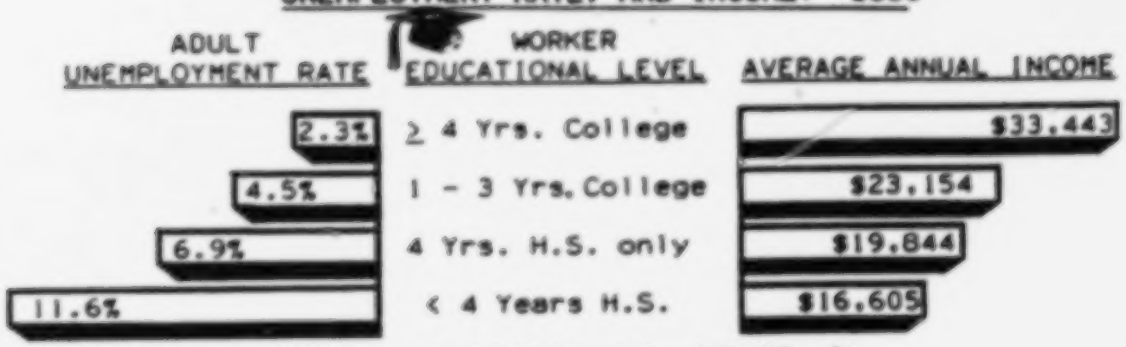
THURSDAY, MAY 12, 1988

COLLEGES DRAW more older students, changing some campus issues.

About 45% to 50% of all college students are 25 years or older, says a recent College Board study. "Increasingly these adults are being absorbed into the mainstream of college education," rather than segregated in night school or special programs, says Carol Aslanian, director of the office of adult learning services. The trend has colleges beginning to address such issues as day-care and family housing, says Adrienne Rulnick, a transfer counselor at Berkshire Community College, Pittsfield, Mass.

A precipitous drop in high school graduates, just beginning, may force colleges to cater more to this market. From 1988 through 1993, the number of graduates will drop 12%, says a new study by the Western Interstate Commission for Higher Education. Numbers won't return to 1987 levels until the late 1990s. With students showing serious interest in college through age 45, schools may be able to tap the baby-boom market until high-school rolls rebound, says the commission's Charles Lenth.

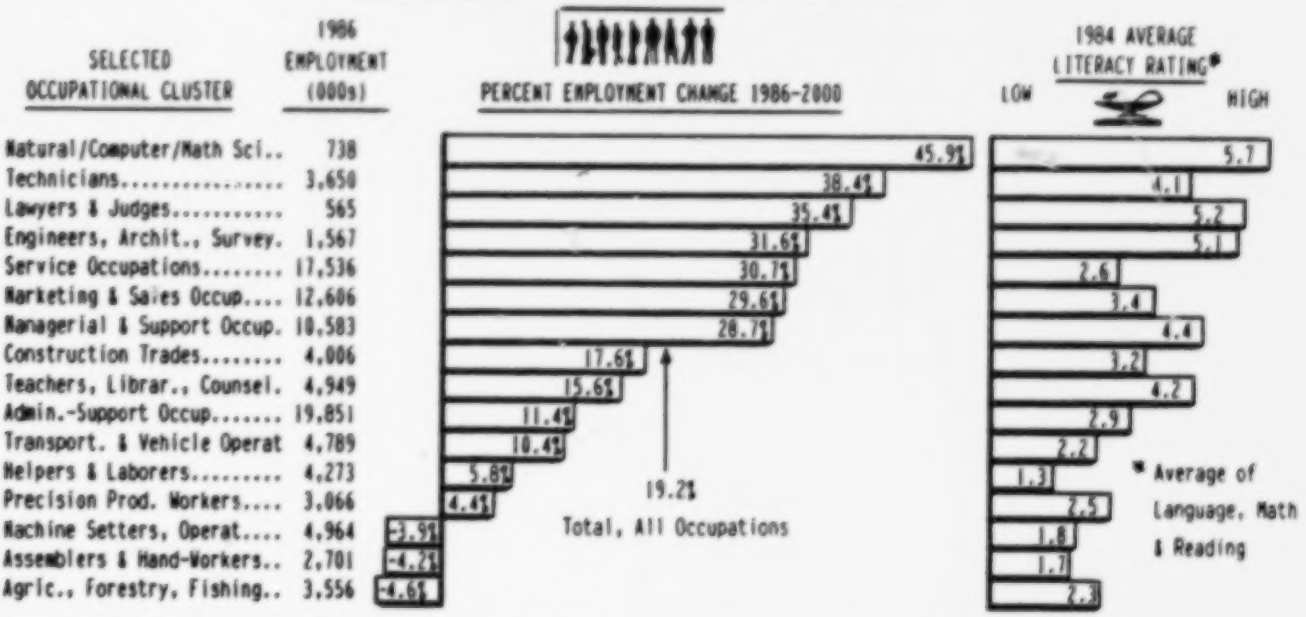
RELATIONSHIPS AMONG EDUCATIONAL LEVEL, UNEMPLOYMENT RATE, AND INCOME: 1986



Source: "Projections 2000," Occupational Outlook Quarterly, Fall 1987, p.34.

The chart above graphically illustrates that: (1) the higher the formal educational level, the greater the average annual income and (2) the lower the formal educational level, the higher the unemployment rate. -- Just two more ways to show that education pays off.

THE CHANGING U.S. LABOR FORCE (1986 - 2000) AND LITERACY SKILL LEVELS BY SELECTED OCCUPATIONAL CLUSTER:

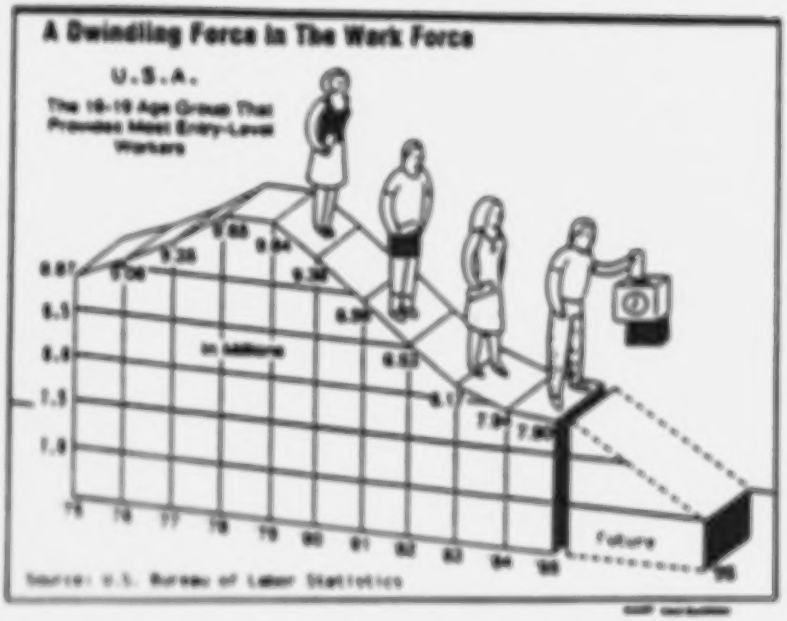

SELECTED OCCUPATIONAL CLUSTER
1986 EMPLOYMENT (000s)
PERCENT EMPLOYMENT CHANGE 1986-2000
1984 AVERAGE LITERACY RATING*
LOW
HIGH
Natural/Computer/Math Sci.. 738 45.9% 5.7
Technicians..... 3,650 38.4% 4.1
Lawyers & Judges..... 565 35.4% 5.2
Engineers, Archit., Survey. 1,567 31.6% 5.1
Service Occupations..... 17,536 30.7% 2.6
Marketing & Sales Occup.... 12,606 29.6% 3.4
Managerial & Support Occup. 10,583 28.7% 4.4
Construction Trades..... 4,006 17.6% 3.2
Teachers, Librar., Counsel. 4,949 15.6% 4.2
Admin.-Support Occup..... 19,851 11.4% 2.9
Transport. & Vehicle Operat 4,789 10.4% 2.2
Helpers & Laborers..... 4,273 5.8% 1.3
Precision Prod. Workers.... 3,066 4.4% 2.5
Machine Setters, Operat.... 4,964 -3.9% 1.8
Assemblers & Hand-Workers.. 2,701 -4.2% 1.7
Agric., Forestry, Fishing.. 3,556 -4.6% 2.3
19.2%
Total, All Occupations
* Average of Language, Math & Reading

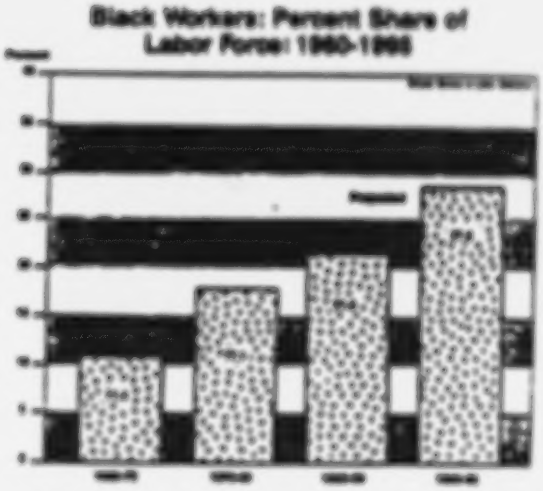
Source: G.T. Silvestri & J.M. Lukasiewicz, "A Look at Occupational Employment Trends to the Year 2000." Monthly Labor Review, Sept. 1987, Vol. 110 (No. 9), pp. 46-63 (Also see Manpower Tid-Bit 87-7, Office of Manpower Studies, Purdue University). And W.B. Johnston & A.E. Packer, Workforce 2000, Indianapolis, IN: Hudson Institute, June 1987.

Much has been written about the growing necessity for all to have mastered the basic academic skills. Looking at future employment projections, the conclusion must be drawn that the fastest growing occupations will require the highest literacy ratings. -- More evidence of the critical nature of a solid education foundation.

B. Labor-Force Characteristics

The labor force, like the population, is aging, causing an increasing number and proportion of the (experienced) labor force to retire and to need to be replaced. However, also as with the population as a whole, the number of youth entering the labor force has been declining and is expected to continue declining until the mid-1990s. **A major effect of this shrinking number of young potential workers is increasing competition among education institutions, the military, and business or industry to attract those youth who are most qualified.**


A Dwindling Force in The Work Force
U.S.A.
The 16-19 Age Group That Provides Most Entry-Level Workers
In Millions
Future
Source: U.S. Bureau of Labor Statistics



Source: "Here They Come, Ready or Not," Education Week (Special Report), May 14, 1986, Vol. V (No. 34), p. 31.

While the youth in the labor force has been dropping, an increasing number and proportion of new labor-force entrants are from disadvantaged backgrounds (e.g., high-school dropouts) and lacking necessary employment education and skills, and the numbers and proportion of minorities entering the labor force has been increasing and is expected to continue growing. Rapidly increasing are Blacks and Hispanics, who are more likely to have disadvantaged backgrounds, and Asian Americans, who are more likely to be well-educated and work-oriented. Also increasing, however, are the numbers and proportion of white disadvantaged potential workers.

The population explosion in Southern and Far Western states has greatly enlarged the labor force and consumer demand in these states. As with population shifts, manufacturing jobs have been shifting from the North to Sun Belt states. Even during the last three years when manufacturing employment was declining overall, manufacturing employment in Sun Belt states was increasing, both in rejuvenated heavy manufacturing and in light manufacturing. Even so, the overall decline in the traditional heavy-manufacturing locations more than offset the gains in the Sun Belt. Many Northern states offset these losses in manufacturing jobs with increases in (typically lower-paying) service jobs.

C. Employment Trends

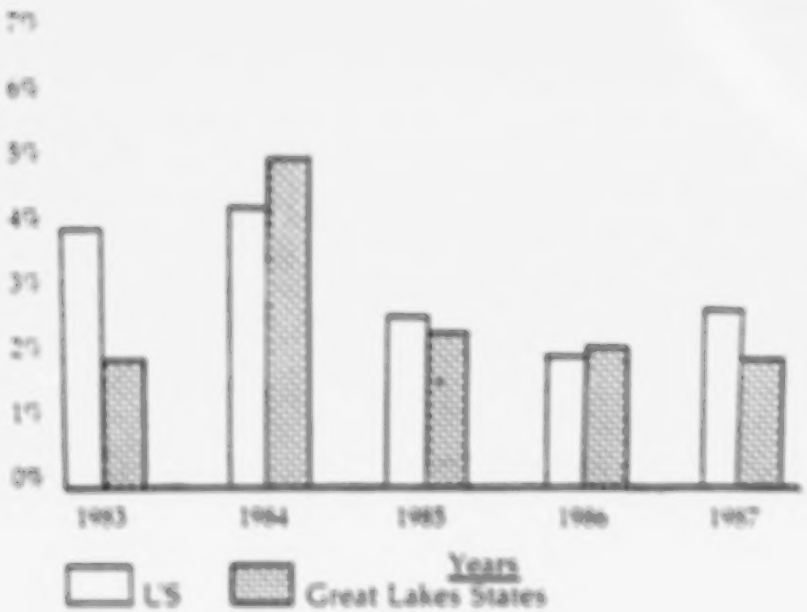
Economic forecasting is always difficult, but it is especially difficult to assess the likely shape of the economy in 1988. Based on the assumption that we continue to make our way through the maze of policy issues facing the national economy, the economy should experience a sixth year of expansion.

If policies were adopted today for reversing the trade deficits now being incurred, we still would be likely to run up a $1 trillion debt by 1991. Substantial increases in exports or decreases in imports will be required to service the debt, to say nothing of reducing it. Both are positive for the Great Lakes area, with its heavy concentration of jobs in manufacturing and its significant agricultural sector. Both sectors offer immediate export opportunities.

However, the further away we are from adopting a set of policies to address the trade-deficit problem, the greater is the probability that major blunders will be made in effecting those policies. This, and the finagling of economic policies so often associated with presidential election-year politics, are precisely the reasons why any 1988 forecast would be fragile.

FIGURE 6

PERCENTAGE CHANGE IN PAYROLL EMPLOYMENT *
FOR THE U.S. AND GREAT LAKES STATES



* The Great Lakes states are Illinois, Indiana, Michigan, Ohio and Wisconsin.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

* From Indiana Business Review, Indiana Business Research Center, Indiana University School of Business, December 1987, Vol. 62, No. 6.

Employment levels vary greatly across levels of attained education. The higher one's level of education, the greater the likelihood of employment. This is especially evident among teenagers when high-school graduates and dropouts are compared. In 1982, 21 percent of White graduates were unemployed, compared with 36 percent of dropouts. For Blacks, the rates were 58 percent of graduates and 71 percent of dropouts. One reason for higher Black rates is probably the lower academic proficiencies of Blacks, even among high-school graduates. Similarly, in 1985, 50 percent of White teenagers were employed, compared with 33 percent of Hispanic teenagers and only 24 percent of Black teenagers.

Significant differences in labor force composition and employment levels also exist for adults 25 through 64 years of age. According to the Bureau of Labor Statistics, the educational level of the civilian labor force has been increasing, both for Whites and for Minorities (see Table below). Between 1975 and 1985, the labor force has included a decreasing percentage of high-school non-graduates and increasing percentages of persons who have some college experience, especially four or more years for Whites and some-college-only for Blacks and Hispanics. A decreasing proportion of high-school non-graduates are even participating in the labor force.

Significantly, the educational levels of Blacks and Hispanics still remain well below that of Whites. Significantly, the proportion of Black adults in the civilian labor force with less than four years of high-school is nearly twice as large as it is for White adults (26% vs. 15%), and the proportion of Hispanic adults with less than four years of high-school is nearly three times that of Whites (44% vs. 15%).

A pronounced difference also exists in labor force participation rates across levels of attained education. The higher the level of attained education, the higher the rate of participation in the labor force (e.g., 60% participation of high-school non-graduates in the labor force in 1985, compared to 88% participation of persons with four or more years of college).

Note that the labor participation rates of those having less than 4 years of high-school dropped for all groups between 1980 and 1985.

TABLE 12

U.S. LABOR FORCE AND LABOR FORCE PARTICIPATION RATES FOR PERSONS 25 TO 64 YEARS OLD BY YEARS OF SCHOOL COMPLETED

Labor Force Status by Years of School Completed (Numbers in thousands)	White				Black				Hispanic Origin			
	1975	1980	1985	1987 (BASE)	1975	1980	1985	1987 (BASE)	1975	1980	1985	1987 (BASE)
U.S. Civilian Labor Force:												
Totals	68,688	68,589	76,739	78,180	6,666	7,729	9,157	9,858	2,893	3,760	5,412	5,860
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
< 4 yrs. of high school..	25.8	19.1	14.7	13.9	46.1	34.7	26.2	23.6	54.3	47.5	43.5	40.3
High School: 4 yrs. only.	48.6	48.2	48.7	48.4	33.8	38.1	39.5	42.4	26.8	30.8	32.8	32.4
College: 1 to 3 yrs.....	14.6	17.7	19.1	19.6	11.9	16.2	19.2	19.9	10.9	13.8	13.7	16.3
: 4 yrs. or more.	19.8	22.9	25.6	26.1	9.1	11.0	15.0	14.1	8.0	9.5	10.8	11.0
Labor Force Participation Rates:												
Total (percent).....	78.0%	74.2%	76.4%	77.5%	69.4%	71.5%	73.4%	74.7%	68.7%	70.5%	71.1%	72.9%
< 4 yrs. of high school..	62.0	61.4	60.7	61.6	61.2	58.1	57.1	58.8	60.5	62.5	62.6	63.9
High School: 4 yrs. only.	78.1	73.7	75.8	76.6	75.2	79.2	77.2	77.6	71.7	75.0	75.9	77.1
College: 1 to 3 yrs.....	75.4	79.2	81.1	81.6	81.1	82.1	85.4	84.5	78.9	82.3	82.8	83.4
: 4 yrs. or more.	84.6	86.8	87.7	88.2	88.3	90.3	89.9	90.4	87.6	84.8	87.8	88.1

Source: Bureau of Labor Statistics News (USDL 85-355), Labor Day, 1985.

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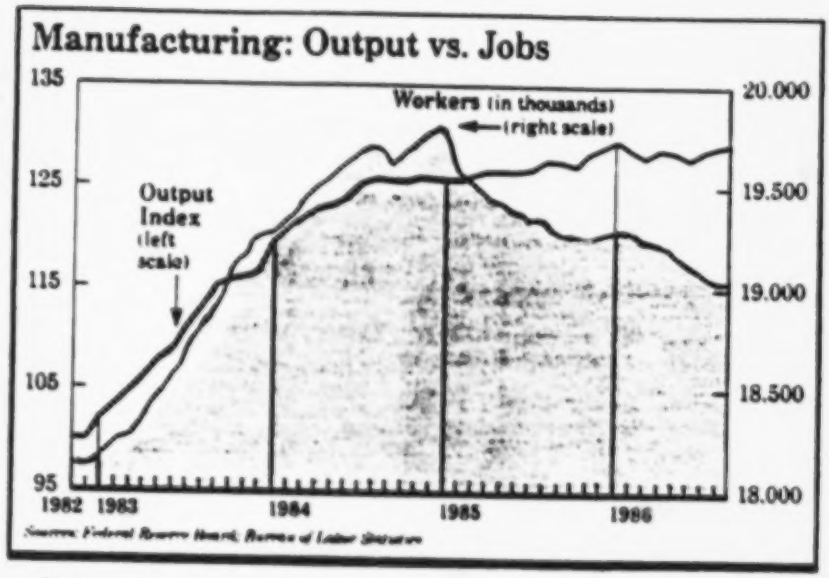
FIGURE 9

Productivity gains have been achieved by major cost cutting and staff reductions, particularly within firms faced with stiff foreign competition and shrinking markets.

The strong performance in manufacturing has been offset by a slowing in growth of farm productivity and practically no growth in productivity in the service sector.

Significant business expansion will be needed to step up hiring.



Source: The Wall Street Journal, December 4, 1986.

Over the 5 years from 1979 to 1984, 11.5 million American workers lost jobs because of plant shutdowns or relocations, rising productivity, or shrinking output.... Of those who found new jobs, at least half took cuts in earnings.

Although manufacturing now accounts for less than 20 percent of U.S. employment nearly half of all workers displaced from 1979 to 1984 worked in manufacturing industries, especially those hard hit by international competition (such as steel, automobiles, industrial equipment, textiles, and apparel). The service jobs that the U.S. economy has created in the past years are not equivalent to the old manufacturing jobs.... and the better service jobs require skills or education that most displaced workers do not have....

For many displaced workers, retraining is the best avenue to a good job with possibilities for advancement. ... Still, strong emphasis on education and training for a substantial minority of people appears to be lacking.

Remedial education for the large number (perhaps 20 percent) of displaced workers lacking basic skills is a clear but unmet need....

Given the incentives leading U.S. firms to invest overseas and take advantage of cheap labor, or to use less labor at home, displacement is bound to continue. Manufacturing jobs -- especially production jobs -- will continue to decline as a fraction of total employment; they are likely to continue to decline in absolute numbers as well. Within manufacturing, the most vulnerable jobs are those of unskilled and semiskilled production workers. These jobs are not only the easiest to automate, they are also the easiest to move overseas....

To meet the challenge of living with global competition while enhancing the quality of its citizens' lives, the United States will have to move on many fronts to upgrade the skills of its work force and to make the best use of the abilities of its people.[5] (6-9, underline added)

Black and Hispanic workers, compared with White workers, are more concentrated in those occupations which have the highest unemployment rates: e.g., operator, fabricator and laborer occupations, "other" service occupations, and farm laborer occupations. These occupations also tend to be at the lower end of the pay scale.

A major reason for minority underrepresentation in higher-level occupations and overrepresentation in lower-level occupations is their lower levels of educational attainment in general. According to the Bureau of Labor Statistics, occupational level is highly related to attained educational level. Adults in 1984 with less than a high-school graduation tended to be employed in semi-skilled-labor, service, or skilled-labor occupations. However, adults with at least four years of college tended to be employed in executive, managerial, or professional specialty occupations.

TABLE 13

PERCENTAGE DISTRIBUTION OF EMPLOYED U.S. CIVILIANS 25 TO 64 YEARS OF AGE BY OCCUPATION AND YEARS OF SCHOOL COMPLETED: MARCH 1987

Occupation	Total	Years of School Completed			
		< 4 Yrs H. S.	4 Yrs. H.S.only	College 1-3 Yrs	College ≥4 Yrs
Total Employed Civilians.....	100.0%	100.0%	100.0%	100.0%	100.0%
Executive, Admin., Managerial.	13.3	4.4	8.6	15.4	23.7
Professional Specialty.....	15.0	.9	3.3	10.7	43.9
Technicians & Related Support.	3.1	.7	2.3	5.4	4.0
Sales Occupations.....	11.0	6.2	11.3	13.3	11.3
Admin.Support, Incl. Clerical.	16.0	6.1	21.8	22.4	7.7
Service.....	11.5	21.2	14.1	10.4	3.3
Precision Prod, Craft & Repair	12.7	20.0	17.1	11.6	3.1
Operator, Fabricator & Laborer	14.7	34.5	18.8	9.1	2.2
Farm, Forestry & Fishery.....	2.5	6.2	2.8	1.7	.8

Source: Bureau of Labor Statistics News (USDL 87-415), Sept. 28, 1987.

A shorter life cycle for job skills is occurring due to the rapid advance and application of technology. This requires the need for new workers to be educated for a wider span of changing options and necessitates current workers to be retrained or upgraded throughout their working careers.

These changes are having and will continue to have a major impact upon the status of the Black and Hispanic workforces in particular. This is the case because of Blacks' and Hispanics' (1) overrepresentation in those occupations being most negatively affected by automation and robotics, (2) lower education and acquired-skill levels, and (3) financial inability to obtain the necessary education or skills training to get, and stay in step with, the changing technological workplace. Accordingly, it is critical for workers to have a fundamentally sound educational base, upon which necessary training or retraining can build. Time and cost to keep a workforce current will be of ever growing importance to employers.

The disappearing, well-paid factory-floor jobs of the past are being supplanted by automation, and their labor-force share is being transferred to lower-paying service jobs. Between 1970 and 1984, 94 percent of the 23.3 million new nonagricultural workers were in service-producing sectors and only 1 percent in manufacturing. Even since the beginning of the current business expansion in December 1982, almost all the 10 million new jobs have been in the service-producing sector. Even in May 1986, of 150,000 new jobs, service industries accounted for 100,000 -- while manufacturing lost 40,000 jobs (115,000 during the previous year). Since the post-recession peak in August 1984, approximately 300,000 factory jobs have been lost.

However, American modernized industries will continue to need a highly-skilled work force. This will require a competent, qualified workforce and will necessitate job training programs to reach displaced workers, emphasizing skills training more strongly. It appears that jobs being created provide income and benefits which are now more related to the extent and relevance of workers' acquired education and training than was the case in the past.

ATTACHMENT I

IMA JOURNAL SUPPLEMENT - HIGHLIGHTS

INDIANA MANUFACTURERS ASSOCIATION

EEO and Performance Appraisals

When performance appraisals are carefully structured and administered, they can provide a safeguard against discrimination claims, according to Barbara Brown, of the Washington, D.C., law firm of Paul, Hastings, Janofsky & Walker. As the focus of equal employment opportunity litigation shifts from hiring to pay, promotion, and conditions of employment, Brown points out, managers need to reevaluate their performance appraisal systems and make sure that they don't leave the organization open to discrimination charges.

According to Brown, various principles concerning the design of appraisal systems have emerged from court decisions. These principles, if adhered to, "will make an appraisal system far less susceptible to challenge." When structuring an appraisal system, therefore, Brown advises managers to:

• Devise job descriptions or analyses for every particular job or group of jobs -- An analysis of the central job duties involved will provide the factors on which an employee's performance is judged and guards against charges of discrimination on race, sex, or age.

• Review job duties with employees at the beginning of the appraisal period -- This removes the "surprise" element and lets employees know both what is expected of them and on what criteria they will be appraised.

• Phrase appraisal criteria in the most objective manner possible -- In the past, courts have disapproved the use of all subjects, or trait-oriented, appraisal criteria. Recently, however, there has been some loosening of this rule in recognition that such factors as appearance, aggressiveness, initiative, and resourcefulness are essential in professional and managerial jobs. Therefore, Brown advises, if you use such subjective criteria, be ready and able to defend them with "concrete examples of their application and the results achieved."

• Involve employees in the appraisal process early -- A preevaluation interview, during which employees may discuss their reactions to the appraisal, provides the workers with an occasion to communicate with the supervisor and can encourage receptivity to the appraisal results.

• Have appraisals reviewed by upper management before giving them to employees -- This can promote consistency in appraisals and prevent any tendency to rate one group more highly than another. (Employee Relations Today, Vol. 12, No. 1, Executive Enterprises, Inc., 33 West 60th Street, New York, N.Y. 10023)

Wrongful Discharge Rules: Management Maxims

By following the "Ten Commandments" of discipline and discharge, employers can avoid the potentially huge financial liability created by repeated court reviews of employee terminations, according to Lloyd Loomis, senior counsel for employee relations at Altantic Richfield Company. Loomis points out that the juries that review wrongful discharge cases often are composed of workers or former workers who tend to sympathize with complaining employees and award them large sums in damages.

• The "Ten Commandments" of discipline and discharge are:

• Review all written company policies and documents that discuss termination or lay off to ensure that they are up to date and do not convey any impression of guaranteed long-term or permanent employment.

• Define the organization's standards of employee conduct and make sure that they are reasonable and attainable. Standards that deal with termination should avoid any inference that discharge will be for "just cause" only.

• Generate "favorable documents" at key encounters, such as hiring and exit interview, disciplinary actions, and benefit explanation sessions. Management should have employees sign forms stating they have received and understand the information.

Source: IMA Journal Supplement, July 19, 1985. IMA Inc., 54 Monument Circle, Indianapolis, Indiana 46204.

• Handle performance evaluation carefully. Few supervisors who complete such forms are completely candid in their appraisals. Frequently, the result is the employee's use of a "wrongful evaluation" charge as the basis for a wrongful discharge suit.

• Develop a written progressive discipline policy covering nonunion workers. The existence of such a policy will help demonstrate the employer's fairness in the event of a wrongful discharge suite.

• Appoint a "czar of discharge" within the firm who is responsible for objectively reviewing all the factors relating to a firing.

• Review all the factors in a case before making a discharge decision. These include the employee's age, the strength of the employer's evidence, the consistency of the employer's application of its policies, and whether the worker was given the opportunity to present the "other side of the story."

• Be sure that the discharge notice candidly states the reasons for the dismissal. Management should, however, carefully avoid statements that might be viewed as defamatory.

• Ensure that the discharge is properly conducted. Management should be mindful of an employee's dignity and confidentiality concerns throughout the termination process.

• Consider whether litigation can be avoided by agreeing to "a deal" with the discharged employee. Examples include agreements to submit the termination issue to arbitration or extend benefits for a specified period.

Substance-Abusers: A Supervisor's Action Guide

Often, employees with substance-abuse problems refuse to recognize the harm their dependencies cause until they are confronted with evidence of their poor performance and warned that they are in danger of losing their jobs. Because of their close daily contact with employees, first-line supervisors are in a particularly good position to identify workers with possible substance-abuse problems. According to Fair Oaks Hospital in Summit, N.J., supervisors can spot possible substance-abusers by watching for performance problems, attendance problems, deteriorating attitude or appearance, and health or safety problems. [underline added]

• Supervisors who suspect that any employee has a dependency problem should keep several do's and don'ts in mind, the hospital advises. The do's include:

• Document -- Confronted with consistent, factual documentation of work-related deficiencies, an employee cannot easily dispute the existence of a problem.

• Intervene -- Early intervention is important because problems will not improve or disappear on their own.

• Stick to the facts -- Don't rely on your memory when confronting a worker with evidence of the problem. Have your documentation in front of you.

• Remain objective -- Getting subjectively involved may impair your ability to identify the problem and help the worker come to grips with it.

• Have a treatment option available -- Be aware of the available agencies, treatment facilities, and consultants to which the employee can be referred for help. Be ready to help the worker contact an appropriate source of aid, and stress the confidential nature of the assistance and treatment efforts.

• Supervisors also should be mindful of the following don'ts:

• Don't lecture or become angry -- Avoid meaningless threats of disciplinary action.

• Don't try to act as a diagnostician or a counselor -- Leave diagnosis to the professionals. Don't give employees the false impression that by speaking to you, they are getting all the help they need.

• Don't refer to off-the-job behavior -- Any references to off-the-job problems will alienate the employee and most likely will be viewed as an infringement on the worker's privacy.

ATTACHMENT II

TO ATTRACT AND TO KEEP GOOD EMPLOYEES

CONSIDER THESE THINGS TO DO:

I. Within the Plant (internal matters)

1. In order that employees can become more aware of the company's goals and anticipated changes, and in order that employees can better prepare themselves for needed future skill and knowledge requirements, provide briefings, not less than every six months (or other appropriate time interval). Include schedules of introduction of changes, identify areas of skill impacts, and any intended in-plant training programs -- or recommended external programs. Additional subjects (such as recognition and awards, introduction of new staff members, etc.) can be included. Changes discussed should include reductions or deletions where appropriate.

2. Have an employee advisory committee for the Director of Personnel (or Human Resources), made up of elected representatives from organization entities who review management's suggested new policies or procedures, provide an objective and constructive "feed-back" mechanism and provide suggestions or recommendations for improvement. [and/or] ...

3. Establish an in-plant joint training advisory committee, composed of three "company" representative (e.g., managers/supervisors) and three "operational workforce" employees ... (can be sub-committee of employee advisory committee described above).

   This group can address recommended training programs for initial training of new employees, upgrading or retraining of current employees, and laid-off employees who desire to become qualified for existing or planned jobs.

4. Provide opportunities for employees to progress in their jobs/careers by making available short-range and special training programs in-plant.

5. Establish and implement a policy of encouragement and provision of information, resources, and support of employees for appropriate external training and education activities pertinent to employee development.

6. Functional illiteracy does exist to some degree in many workplaces. Usually, the best observer of these instances is the first-line supervisor (e.g., the foreman or office manager). A confidential procedure should be in place to verify such cases and encourage and assist such workers to become literate. Normally, there are a number of community educational settings available which can be used, in addition to the company's efforts.

7. First-line supervisors are at the cutting edge of the inter-face between management and line workers. Productivity, quality and safety; people, materials, machines, equipment, processes; schedules, reports, changes -- these and more are on the supervisor's mind and shoulders. Management can often profit by the recognition and special training of these key people, to assure their proficiency. The need for good supervisors becomes even more critical when a labor shortage exists, quantitatively and/or qualitatively.

8. Provide good communications up and down the line: (a) Regular short meetings with all employees for reports and discussion, (b) A Newsletter where both employer and employees have input, (c) "One-on-one" meetings for special situations/circumstances, and (d) a suggestion system with awards.

9. Establish an in-house employee personal-assistance program, providing confidential advice and reference services. Purpose is to get troubled and less productive persons back on track (e.g., alcoholism/drug problem, wife-husband-children abuse situation, financial or legal problems, serious stress/mental/physical problem, etc.). Prepare managers and supervisors with instructions to assure proper actions are taken to assure assistance is provided -- and problems are avoided where possible. (e.g., see "Substance-Abusers: A Supervisors Action Guide" -- Appendix II.)

10. Design, announce, and implement a performance appraisal system based on sound equal-employment-opportunity principles that apply not only to hiring, but also pay, promotion, and conditions of employment. (See "EEO and Performance Appraisals" in Appendix II.)

11. Design, announce, and implement a system concerning discipline and discharge which can avoid potential financial liabilities and problems, (e.g., apply the "Ten Commandments of Discipline and Discharge". (See Appendix II)

12. Have an open and up-dated occupational/job classification system that describes job functions, qualifications, wages and related matters.

13. Give fair/competitive wages and fringe benefits. Avoid giving absolute minimum wages in order to gain an edge over competitors; this may result in more qualified job applicants, thusly providing some selectivity and, potentially, better productivity.

14. Promote (move up to "better" jobs) from within whenever possible. Review current employees' applications and credentials before advertising "outside". Let employees know they come first.

15. Offer on-site (or otherwise support external) day-care, flextime, job sharing and/or part-time work wherever needed and feasible.

16. Have employee recognition awards and/or pay bonuses for workers helping company (e.g., productivity, quality, suggestions, etc.). Take advantage of positive PR opportunities these provide. Work to project a positive image of the company throughout the community.

17. Provide relocation assistance wherever critical personnel situations exist.

18. Provide housing assistance if needed.

II. Outside the Plant (external or community matters)

1. Cooperate and communicate with local educational administrators and teachers concerning basic educational/training needs of high-school graduates. Stress the need for mastery of the basic academic skills (3-R's) plus development of a constructive attitude and work ethic.

2. Participate in high-school activities, particularly those concerning career planning, job counseling, and preparation. Encourage employees who have children or grandchildren to become active in parental involvement activities in their schools, to assist their children in their school work and to assist teachers and administrators.

3. Provide co-op and work-study opportunities for local students in high-school and post-secondary programs wherever possible.

4. Provide information, opportunities, financial assistance, and active encouragement to all employees for local/external post-secondary training/education courses and programs relevant to firm's needs. Publicly recognize employee's achievements, record same in personnel records, and where possible, add responsibilities, pay and/or job title.

5. Sponsor and/or assist in community activities and projects. Include:
   a. Fund drives -- provide leadership persons and contributions,
   b. Sponsor/assist in academic competition and recognition, and in sports and arts programs/teams (particularly those which can be identified with the company),
   c. Recognize deserving employees for community or company service.
6. Provide leadership, ideas and resources for new and worthwhile continuing community improvement endeavors.
7. Establish (or participate in) a business/industry-sponsored community endowment or grants fund for such things as teacher fellowships and professional development, student dropout and illegitimacy prevention measures, and innovative school programs.
8. Establish and maintain a good relationship with communications media, (e.g., newspapers, radio and TV).
9. Become familiar with, use and support all local agencies and organizations which can assist you in finding qualified new employees and in helping to train and retain current employees. These may include the local public school system, JTPA, the Northern Indiana Job Alliance (see Attachment V), Elkhart Branch of the Indiana Department of Employment and Training Service, the various providers of education and training courses and programs, the Elkhart Multiple Listing Service, and the Michiana Rentals Inc. for housing, etc.

III. Where to Look for New Employees:

1. From recent high-school graduates and/or graduates from appropriate post-secondary vocational, technical-institute or college programs (particularly those who might have been previous co-op or work-study students or from other types of school/industry activity). Maintain close working relationships with such institutions.
2. From those recently retired (e.g., "early" retirees from business, industry, military or civil service) and from self-employed or temporary workers.
3. Women who wish to enter or re-enter the workforce (e.g., displaced homemakers, recently widowed and desirous of income, second family breadearner, etc.). This may take special out-reach efforts, counseling, support and training.
4. From other companies/agencies which are closing, having a reduction in workforce, personnel changes, or other reason.
5. From the local branch office of the Indiana Department of Employment and Training Service and other employment referral organizations.
6. General advertisements: newspaper, radio, billboards, posters, pamphlets, etc. and
7. Targeted advertisements/recruitment in areas with workforce surpluses (i.e., displaced workers -- such as from steel or transportation firms -- high unemployment rate communities, etc.).

A note about DIVERSITY

WITHIN AN INCREASINGLY INTER-DEPENDENT SOCIETY

In The Workforce

One of the more significant changes in the workplace over the past twenty years has been the emergence of a more and more diverse workforce. For example, there are more women in the workforce in a wider range of occupations; Black males or females may have supervisory responsibilities over White males and/or females; men and women from varied cultural backgrounds are working for and with each other. In essence, men and women in working groups are becoming more and more pluralistic, i.e., members of diverse ethnic, racial, religious, age or social groups largely maintain an autonomous participation in and development of their traditional culture or special interest within the confines of a common work setting.

In Education

The educational environment is largely a mirror reflection of the pluralism evident in the workplace; ... as time passes, there will be more diversity and more differences from traditional experiences. In fact, these waves of growing diversity ripple through educational institutions at all levels -- elementary, secondary and collegiate -- before they wash ashore in the workplace.

Managing Diversity

Managers, administrators and educators dependent upon racially, sexually, culturally or other diverse populations will have to identify and understand the differences and issues implicit in diversity and develop understandings, policies and procedures for coping.

> Business is now getting worried because the baby bust is coming. There are not as many new entrants to the labor market, and business is really worried that it can't find qualified workers. So maybe there's an opportunity now to appeal, in the name of enlightened self-interest, to corporations and the rich to utilize America's greatest single resource, which is the skill and technical potential of its population.

NOTE: *The growing importance of diverse populations is illustrated by special, related seminars offered by the American Institute for Managing Diversity, Morehouse College, Box 83, Atlanta, Georgia 30314.*

ATTACHMENT IV

Employment Policies: Looking to the Year 2000

Major changes are anticipated in the workplace between now and the year 2000. While economists differ over the impact of these changes, all expect them to be significant. Some expect our economy and society to undergo an "economic and political shock" due to new technology, stiff international competition, changes in consumer tastes, and demographic shifts. These forces will result in pervasive mismatches between workplace needs and workforce capabilities....

THE DEMOGRAPHIC AND ECONOMIC SETTING

Over the next 10 to 15 years, the workforce will undergo a major change in composition. Most striking will be the growth of less well educated segments of the population that have typically been the least prepared for work. The number of minority youth will increase while the total number of youth of working age will decline. The numbers of high school dropouts and of teenage mothers will rise. At the same time, entry level jobs will increasingly require basic, analytical, and interpersonal skills. The labor market will need to accommodate still other changes in the workforce. Women will account for the majority of labor force growth. They will bring with them not only special needs for child care but continued pressure to move beyond traditional "women's work." The workforce also will be aging. Over 75 percent of the workforce in the year 2000 is already working today.

At the same time, the workplace is expected to change significantly. From 5 to 15 million manufacturing jobs will be restructured, and many service jobs will become obsolete. While it is expected that service jobs will replace those that are lost, the disruptions will be great and the need for training and retraining will be more significant than ever.

While these major changes are occurring, the federal government will seek to reduce overall spending. Of necessity, other sectors of society -- particularly state government and the business community -- will need to assume greater responsibility for developing and conducting education and training programs.

IMPLICATIONS AND CHALLENGE

Business, government, public and private training institutions, schools, and labor -- all must work in partnership to ensure that the necessary education and training are provided with a minimum of duplication. The public at large must see education, training and retraining as a lifelong process, vital to their working lives.

Business and government must look beyond education and training programs. The most rapidly growing, yet most vulnerable, of the nation's labor pool is concentrated where schools are inferior, work experience opportunities are poorest, and available full-time jobs are declining. Although business will need these workers, they will not be prepared to work and will often find jobs inaccessible to public transportation. Many potential workers will turn to welfare; some will turn to crime. These individuals will be a drain on society and will be lost as consumers of business' products and services. Public/private partnerships are needed to create jobs in these distressed areas, to provide labor market information, and to develop better transportation systems to existing jobs.

A new employment policy is needed that encompasses traditional public training programs as well as public education systems, training provided by both the private sector and labor, economic development programs, the employment service system and income maintenance systems, including unemployment insurance and welfare.

New forms of governance should be considered. Stronger public/private institutions at state, local and federal levels should be strengthened to address these problems.... Business will have to assume greater responsibility in training the workforce. Employers will need to be more involved in the development of community and state strategies, and they must help improve their state and local education systems and training institutions. In addition, employers have the responsibility for assuring that their own employees are trained and retrained to meet the needs of the changing workplace.

States should assume primary responsibility for addressing the needs of their citizens for job training, education, economic development, welfare and job placement. At the same time, local governments should have the flexibility to identify priorities and design and operate programs that meet their particular needs. The federal role should articulate national policies on employment and facilitate activities at the state and local levels to carry out these policies. Federal funds should supplement state and local resources to meet special needs. To some extent, these shifts in governance have already begun to occur.

We look to the year 2000, it is in our national interest that we move forward together, committed to making the best use of limited resources.

Source: National Alliance of Business, 1986

ATTACHMENT V

THE CHANGING NATURE OF WORK

It is important to address the demographic trends affecting the work force (e.g., decline in number of 18- to 24-year-olds, an increase in the proportion of minorities in the population, and the "at risk" groups of youth and adults who are increasingly unable to participate successfully in this ever-changing technological society).

It is also very important to examine nondemographic trends which require a solid educational foundation of basic academic skills (e.g., reading, reasoning, writing and computational abilities, and knowledge of the principles of science), as well as successful inter-personal skills. The fact is that the nature of work is changing at all levels -- and new jobs as well as most old jobs will require higher <u>minimum</u> levels of basic skills for job entry, and continuing education and training to remain effective and to progress.

It is necessary for workers to be able to <u>apply</u> these basic skills in the work place in order to accomplish tasks and make assessments. This is becoming more evident for both service as well as so-called high technology jobs. More adults are in need of upgrade and retraining, but those who do not have the necessary basic skills foundations will have very few occupational choices.

This latter point is illustrated in the results of a recent survey where the majority of responding companies reported basic skill deficiencies limited the advancement of their employees. Percentages of these reported difficulties included:

● Secretaries having difficulty reading at the level required by the job	30 percent
● Managers and supervisors unable to write paragraphs free of mechanical errors	50 percent
● Skilled and semiskilled employees, including bookkeepers, unable to use decimals and fractions in math problems	50 percent

Still another survey of 25 corporations within the Fortune 500 companies was conducted to determine the involvement in training with the following results:

▶Management training	91 percent
▶Skill and technical training	68 percent
▶Clerical training	32 percent
▶Sales training	41 percent
▶Trade and craft training	18 percent
▶Basic education training	9 percent
▶English-as-a-second-language (ESL) training	14 percent

▶ The above reinforce what human resource managers have known for years ... to have and to hold <u>good</u> employees, careful recruitment, tender care <u>and</u> continuing development actions are critical.

<u>Source</u>: *<u>Job-Related Basic Skills: Cases and Conclusions</u>, Information Series No. 285, by Thomas G. Sticht and Larry Mikulecky*

ATTACHMENT VI

THE CHANGING DEMOGRAPHIC, ECONOMIC AND SOCIAL SETTINGS
(A SUMMARY)

Major changes are occurring -- some documented trends are well under-way, and more are anticipated: among the significant ones are ---

- Changing demographics -- There is a growing diversity in the population. There will be proportionately fewer young people -- but more older people. There will be a higher number and proportion of ethnic minorities, and growing urban and rural disadvantaged populations made up of all ethnic groups. The per-capita income "gap" will widen between "haves" and "have nots".

- Advancing technology -- e.g., in science, micro-electronics, computers, materials, genetics, biotechnology, energy, manufacturing, optics, medicine, telecommunications -- to mention a few. Most of these affect consumer products and services. The rate of change continues to accelerate.

- More intensive global-international relations, inter-dependence and competition. This will bring about much greater complexities and have more significant economic, social and political ramifications.

- Changes in Education: The educational levels of most Americans will continue to rise slowly, but the disparities (gap) are large between levels of education of White American vs. those "at-risk", i.e., Blacks, Hispanics and Native Americans (as well as urban and rural disadvantaged of all ethnic groups). This will have deleterious effects on our economy and society. There will be a continuation in the higher proportions of at-risk youth who experience lower academic successes and drop out of high school for a variety of reasons. The poor will face even greater obstacles (both academic and financial) in participating successfully in post-secondary vocational training or college-level education programs; this applies to at-risk adults as well as youth. Of more and more importance to every worker is the acquisition of a sound educational foundation and good personal attributes in order to get a good job, and in order to be (re)trained and upgraded as changes occur, with the least cost to employers in terms of time, money and other resources.

- Changes in the Workforce and Workplace
  - Workforce. There will be fewer (total) numbers of working-age youth -- with more minority representation, resulting in keener competition among military recruiters, educational institutions and employers for youth having the "best" qualifications. There is an aging of the many baby-boomers born shortly after WW II, many of whom are greeting their fortieth birthday. Also, many women have joined the workforce largely because of two historic forces. First came the feminist movement of the 60's which encouraged housewives to seek fulfillment in a career. Second, economic recessions and inflation came in the '70's. Dual incomes became more of a necessity. This rapid expansion of the labor force is now slowing perceptibly. However, this changing pool of workers has resulted in a growing mismatch between the skills they have or bring to the job and those skills employers need most.
    - There will continue to be large numbers of displaced workers who have lost their jobs due to plant closings, automation, new products or processes, new materials and other reasons. Most displaced workers get jobs at lower than previous earnings, or part-time work; but some remain unemployed largely because of educational and skill levels inadequate for the qualifications needed for emerging, higher-complexity, and changing job requirements, and because they live in places where there are inadequate employment opportunities.
    - On the positive side, there will be growing needs for workers who do possess necessary qualifications pertinent to new or changing (growth) occupations. A sound educational base, good attitude and positive interpersonal skills are becoming more critical to get a job; continuing education and training

is becoming a necessity to advance in a career. In such instances, wages and benefits are usually much better.

- More employers are opting to use contingent or "temporary workers" to meet peak loads. Problems of promotion, pay raises, fringe benefits and unions are avoided. These "just in time workers" some self-employed, range from file clerks, skilled secretaries and computer specialists to managers and white-collar professionals, particularly in the service sector. The Department of Labor estimates that up to one out of every four jobs are done by contingent workers.

- Workplace. A number of significant changes are happening which affect millions of jobs. Among these are:

This is what is known as a workplace

  - The number of jobs in manufacturing may continue to decrease slightly but change significantly due to foreign competition, to foreign low-cost labor and to improved productivity (automation, computer integration, new processes and materials, etc.). The loss of manufacturing jobs has been more than offset by an increase in numbers of service jobs. An unknown is the extent and nature of new occupations that will be created in response to new technologies. However, these new occupations tend to require higher levels of education and skill than the old manufacturing production jobs.

  - The average wages paid in manufacturing jobs are higher than the average wages in service jobs. For example, in Indiana the 1985-86 average weekly wage for the "job-lost" category (mostly in manufacturing) was $471.19 whereas the average weekly wage for the "job-gain" category (essentially in personal services) was only $317.77. If this trend toward more lower paying jobs continues, we can expect to experience a profound reduction in the average standard of living and greater disparity between the haves and the have-nots. Two incomes from service jobs will be required to provide the same life style that one manufacturing job allowed; the proportion of more households with two or more workers continues to grow.

  - Entry level jobs in the workplace will increasingly require persons who have basic academic, analytical, and interpersonal skills. Many jobs are increasing in complexity, and computer applications are expanding. The jobs that are projected to grow the fastest (percentage increase) usually require at least some college education.

  - Increasing are pools of skilled workers (e.g., computer related or other specialized occupations) who can be trained and hired out to different employers on a temporary basis in order to meet peak work loads or rapidly changing conditions.

  - The evolution of computer technology and expanding applications are rapidly changing the workplace as well as the nature of many jobs. Advances increasingly allow more planning, control and operations to be performed through information systems or networks on local, national or worldwide scales.

ATTACHMENT VII

Employers will be begging for skilled workers, while the unskilled are left out

The great jobs mismatch*

This Labor Day and for the rest of the century, the U.S. is hanging out a "Help Wanted" sign -- but only selected applicants need apply. Not only is the pool of new workers shrinking fast, there's also a growing mismatch between the skills they bring to the job and those employers are crying for.

The scramble could herald a golden decade of rising salaries and greater job opportunities for anyone trained to handle advanced technologies and complex information. More women will get the chance to move up to managerial and technical positions. Opportunity will knock for many baby-boomers sidetracked in the 1970s. Trained immigrants will be sought after. But for people without a college education or experience, the century's closing years could be an economic dark age.

Looking at the numbers, the U.S. labor force is on a demographic roller coaster, careening from the baby boom to the baby bust. Between now and the year 2000, the supply of new job seekers will barely inch ahead, expanding by just over 1 percent annually. That follows the '60s and '70s, when waves of baby-boomers, immigrants and female workers swelled labor's ranks by 2.4 percent a year -- growing faster than the population of India. Today, the nation counts 25.4 million 16-to-24-year-olds as the prime source of new labor. That's 1.1 million fewer than just a decade ago. And the number of youth of that age is expected to fall 5.1 million more in the next 10 years.

With fewer new workers to choose from, "the economy is catching fire for almost anyone with good education and experience," says Gordon Berlin of the Ford Foundation. Jobs for accountants, for example, are expected to jump by 40 percent, to 1.3 million, by the turn of the century, according to the government's Bureau of Labor Statistics (BLS). Slots for doctors, teachers and other professionals are forecast to soar by 3.7 million or nearly 30 percent.

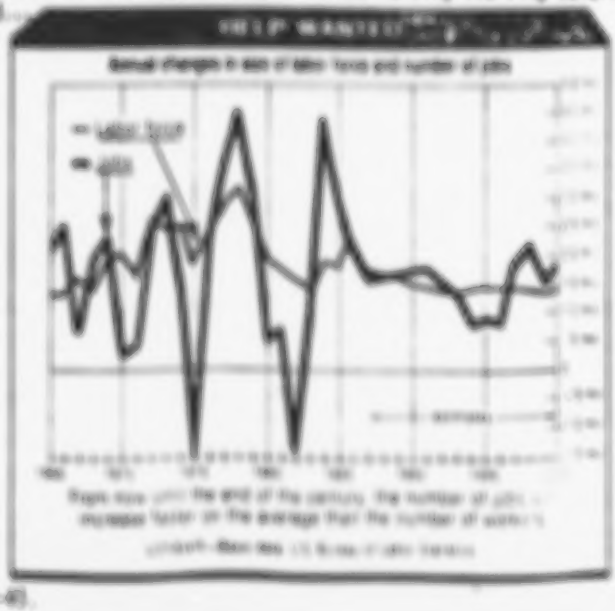
But behind that good news, "there is a widening gap between what the economy requires and what the new labor force will provide," says Thomas Espenshade, senior research associate at the nonprofit Urban Institute. He estimates that through the end of the century, three fourths of all new jobs will need people with some college education and skills -- while only about half of all new workers are likely to have gone beyond high school. Moreover, computerization of the workplace will move millions of today's lower-level jobs out of the reach of the less skilled. ... As a result, the labor force may well include a growing army of unskilled workers, especially young blacks and Hispanics, facing at best fitful employment.

Boom time for baby-boomers

The squeeze for new skilled labor is forcing many employers to take special steps -- from raising starting salaries to expanding retraining programs -- to get the people they need.

However, the big winners in coming years may well be educated and experienced baby-boomers. Some of those boomers, forced in the 1970s to take jobs for which they were overqualified, will get second chances to shift directions and move up. "Companies paying top dollar are figuring out they can find 30-year-olds with experience who will gladly work nearly as cheaply as the top new graduates," says Victor Lindquist, head of job-placement services for Northwestern University.

Even more important for the boomers, many firms are easing the labor squeeze by expanding on-job retraining. ... Says Peter Cannon, Rockwell [International's] chief scientist: "We need certain numbers of skilled people, and we will do what we have to to get them. With the demographics of the baby bust, it's cheaper to retrain those we've already got."



*Source: U.S. News & World Report, September 7, 1987, pp 40-43.

The tightening market for skilled labor will also help working women. The gap between women's and men's wages -- what Columbia University economist David Blank calls "one of the remarkable constants in economics for over 30 years" -- already is beginning to close. In the last six years, the ratio of women's wages to men's rose from 60 to 65 percent. And the Census Bureau reports that working women, age 20 to 24, now earn on average only 16 percent less than young men -- compared with a 23 percent gap in 1980.

More choices for women

The wage gap will close even faster if, as expected, the labor squeeze lures more women to higher-paying occupations. ... There are signs that more women are being drawn to male-dominated fields: Some 40 percent of new business-school students are women.

Whatever their jobs, more women will take their places in the working world -- if only because more women now consider meaningful and well-paid work to be a desirable and achievable goal. The BLS estimates that, by 1995, 81 percent of adult women age 25 to 44 will hold jobs, as against 72 percent today.

Even more than in the past, America is becoming a land of special opportunity for highly skilled immigrants. Because of a dearth of homegrown applicants, foreign-born and trained doctors accounted for 29% of the 1,752 first-year residents and interns hired in 1986 by New York City's public medical facilities. Foreign-born students, many of whom will stay to work, earn more than half of new Ph.D.'s in engineering from U.S. universities and nearly one third of doctorates in physics.

Hard Times for Minorities

For all its opportunities, the new American labor market won't be a welcome place for those without a sheepskin or special skills. Minorities may find themselves in special peril. Nearly half of all new workers between now and 2000 will be black or Hispanic -- groups "disproportionately represented among those with less education," according to a new Labor Department study of Americans' job prospects in the 1990s.

Pages of want ads for counter jobs at fast-food restaurants show that there is still work for those with few skills. In some areas, fast-food outlets short of teenage help are taking on recent retirees, and experts say new jobs in restaurants, especially part time, will mushroom through the '90s. The problem for young, inner-city job seekers is that most of the jobs are in prosperous suburbs, out of commuting range. The same Catch-22 is forecast for agriculture, especially in the West, if immigration restrictions cause labor shortages.

WHERE THE JOBS WILL BE

10 fastest-growing occupations	Change, 1986-2000
Paralegal personnel	104%
Medical assistants	96%
Physical therapists, assistants	88%
Data processing equipment repairers	82%
Home health aides	82%
Computer systems analysts	76%
Medical-record technicians	70%
Employment interviewers	71%
Computer programmers	70%
Radiology technologists, technicians	69%
...And 4 that will lose jobs	
Electrical, electronic assemblers	-6%
Industrial machine, tool operators	-15%
Stenographers	-28%
Farmers, farm workers	-29%

Note: Projections are among occupations with 25,000 workers or more and exclude fabricators, assemblers, groups comparable in size to Dept. of Labor

The pinch on the low-skilled will be aggravated by a continuing slide in well-paid blue-collar jobs. The Department of Labor estimates that U.S. manufacturing, which lost 2 million jobs over the last seven years, will lose 834,000 more by the year 2000. What's more, jobs still open to the low-skilled are paying less. Adjusted for inflation, the average earnings of 30-year-old high-school dropouts plummeted by 41 percent, to less than $11,000, from 1973 to 1985, and the trend continues. For 30-year-old high-school graduates, average earnings fell by some 30 percent to $17,200 during the period. It is only the college grads whose inflation-adjusted incomes at age 30 are moving up again, after remaining steady at around $26,000 from '73 to '85.

All the evidence "points to growing economic inequality," says University of Maryland economist Frank Levy. And that poses the danger that the U.S. will enter the 21st century as a nation of haves and have-nots glaring at each other across a deep divide defined by education and skills.

ATTACHMENT VIII

MISMATCH: SKILLS PEOPLE HAVE AND EMPLOYERS' NEEDS

IMPLICATIONS FOR PRODUCTIVITY

The mismatches posed by the demographic and economic setting are striking and disturbing:

- More jobs will require not only basic skills but also problem solving, analytical and communicating skills, yet a growing percentage of the projected new labor force entrants are expected to lack these skills.
- Change will be the hallmark of the workplace, but many smaller businesses are too small to provide formal on-site training, while many training facilities they might use are out of date; at the same time, most of the workforce of the late 90's and year 2000 is already working and will need retraining.
- Dislocation can be expected, several magnitudes larger than we have known in the past but attempts to address these dislocation problems have proved inadequate to date.
- More than ever both youth and adults will need better information on available jobs and a better understanding of their aptitudes; yet programs for labor market information, counseling and assessment have regularly been reduced over the last number of years.

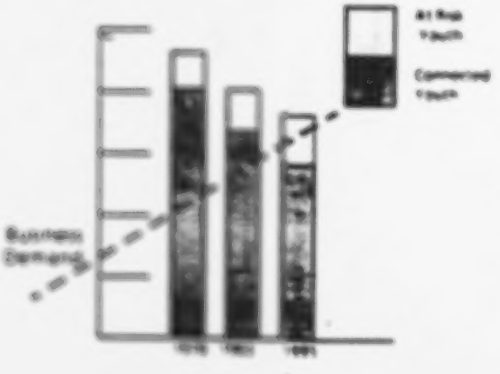
If nothing is done to address these problems, serious repercussions are likely.

Employers will find it difficult to fill entry level jobs. Finding large numbers of youth unmotivated and under-educated, business might appeal for increases in immigration or out-source work to other countries. If those options are not feasible, employer costs for remedial training and hiring young people would increase substantially, reducing business' competitiveness in the world market. And where opportunities to use outside labor increase, we can expect large segments of our population to be left out, unable to obtain work. The effects to society of this growing under-class are obvious: increases in welfare, crime, and unrest.

Prime age workers will become less productive. The nature of the jobs of most current workers will change in the coming decade. If employers have not anticipated or prepared workers for these changes, job losses may occur; certainly, there will be inefficiencies in operation. Workers are also apt to be less committed to their work if they believe their employers are not systematically attending to their training and retraining needs. An increasing number of workers, who may need or want to change careers to increase job satisfaction or stability, may find that public and private institutions are unable to provide proper guidance about the labor market or offer appropriate training. At best this will result in losses in productivity; at worst it will lead to long-term dislocation.

TABLE 2

Declining Youth Population With an Increasing At-Risk Segment Compared to Rising Business Demand for Entry-Level Employees



In 1978, 23 percent of the total U.S. population were between the ages of 16 and 24. By 1983 that percentage had dropped to 19 percent. Based on current birth rates, it will further decline to 16 percent by 1995. At the same time the percentage of youth at risk is growing. Assuming that the nation's economy continues to expand at a moderate pace, business will be forced to dip increasingly into the at-risk segment of the entry-level youth employment pool.

Reprinted from *Reconnecting Youth* with permission of the authors, the Education Commission of the States, Business Advisory Commission.

ATTACHMENT IX
HIGH SCHOOLS AND THE CHANGING WORKPLACE: THE EMPLOYERS' VIEW
(HIGHLIGHTS)*

Summary

The largest segment of the American work force consists of high school graduates who have not attended college, and the nation's economic well-being depends heavily on their performance....

What Is Needed

This report concentrates solely on the needs of high school graduates entering the labor force from high school and reflects employers' views of what these graduates will need to perform effectively in the workplace in the years ahead of them.

The panel approached its task from the viewpoint of necessary skills rather than required courses. How employees obtain skills matter less to employers than whether they possess them. ... Young people ... must prepare for a lifetime of change, both in the nature of work and in the working environment.....

Finally, the panel deplores the tragic waste of talent, energy, and aspirations symbolized by the large numbers of young people who do not finish high school..... A high-quality secondary education represents the minimum preparation a young person needs to participate successfully in our economic system....

Size ... often limits severely the resources available for helping employees to learn skills. Where a large corporation or agency may maintain an elaborate training program -- perhaps even a formal school -- a small enterprise might be hard-pressed to release an experienced employee to train a newcomer. Large corporations frequently prefer to hire bright, well-educated nonspecialists and teach them their own way of processing data, mixing chemicals, maintaining equipment, and the like. A small employer, however, often needs an employee who already possesses specific job skills. Skills obtained in vocational courses or previous work experience might be crucial, therefore, to getting a good job with a small employer; such skills often matter less to large employers who intend to put a new worker through a training program anyway. Because small employers constitute so significant a number of those who hire young workers, vocational skills, in addition to a sound education in the core competencies, certainly increase employability.....

Jobs for a Lifetime: Careers

A job, in other words, is not a career. A career is a series of jobs, each often involving new responsibilities, new knowledge, and new skills..... The ability to learn, therefore, is vital to every worker throughout an entire working lifetime. ... Careers are built on performance over a number of years and, ideally, on a number of increasingly desirable jobs. The early ones need not either define or limit the ultimate character of a career. What defines and limits a career is the individual's ability to learn throughout life. What will never change is the need to adapt to new opportunities.

What High School Graduates Need

A person who knows how to learn is one well grounded in fundamental knowledge and who has mastered concepts and skills that create an intellectual framework to which new knowledge can be added.

It is precisely in the basic intellectual skills, however, that young employees show the greatest deficiencies. Many lack the ability to draw correct inferences from written, pictorial, or mathematical information; to understand oral instructions; to develop alternatives and reach conclusions; to express their ideas intelligibly and effectively; and to apply such basic concepts of economics as profit and cost. All of these skills are important, even in entry-level jobs. Advancement to more responsible posts requires skills of an even higher order, including the ability to compose tables and reports, to consult reference and source materials, to apply mathematical concepts and procedures, to control complex equipment, and to address groups....

Beyond these specific skills, the panel agrees that young people need additional characteristics to succeed on the job: attitudes and understanding that lead to good work habits and successful interpersonal relationships. A clear understanding of the rights and responsibilities of workers and employers, and of the place of each in American economic and social life, will help students to function effectively as workers and to exercise their rights as employees and citizens.

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* Panel on Secondary School Education for the Changing Workplace, *High Schools and the Changing Workplace: The Employers' View*. Washington, D.C.: National Academy Press, 1984. 2101 Constitution Ave., N.W.: Washington, D.C. 20418. 58p. $5.25.

Schools cannot meet the specific demands of every employer, of course. ... Yet, schools can, and must, teach students the basic skills that underlie these specific job requirements....

The panel has concluded, therefore, that the need for adaptability and lifelong learning dictates a set of core competencies that are critical to successful careers of high school graduates. These competencies include the ability to read, write, reason, and compute; an understanding of American social and economic life; a knowledge of the basic principles of the physical and biological sciences; experience with cooperation and conflict resolution in groups; and possession of attitudes and personal habits that make for a dependable, responsible, adaptable, and informed worker and citizen.

... [T]he education needed for the workplace does not differ in its essentials from that needed for college or advanced technical training. The central recommendation of this study is that all young Americans, regardless of their career goals, achieve mastery of this core of competencies up to their abilities. For those intending to enter the work force directly after completing high school, additional training in specific vocational skills will increase employability and is naturally desirable. But no other skills, however useful or worthwhile, can substitute for the core competencies.

Young people not planning on going to college may not require advanced or highly theoretical courses..., but they must have a working knowledge of these disciplines to permit them to perform job tasks accurately, correctly, and with understanding....

Mastery of the core competencies to the best of one's abilities is both a necessary and reasonable goal. What differentiates students who end their education upon completion of high school from those going to college is not necessarily the ability or desire to learn.... These differences do not dictate any lowering of educational standards, but they may suggest some variation in educational settings or techniques. Some students learn best in a scholastic environment; others in settings closer to "real life." Students not planning on postsecondary education, however, actually have less time to master the foundations of learning than those going on to college.... [Underline added]

The Core Competencies

The core competencies judged by the panel to be required by employers and, by extension, for success in employment, are ... not exhaustive, but rather illustrative. ... These competencies are transferable, vital to almost every job except the least skilled, and essential to upward mobility and adaptability.

Command of the English Language ... Although a second language may be useful in job mobility, all American young people, regardless of their home or native tongue, need a functional command of standard English in its written and spoken forms.

Reasoning and Problemsolving The capacity to reason and solve problems is the central indication of an educated person.... The ability to understand the consequences of alternative courses of action is an essential condition for success in employment....

Reading Each student needs to be able to read, comprehend, and interpret written materials.... [E]very course in every academic subject can require students to read and write critically and extensively....

Writing ... All students need to be able to organize information and state it clearly and concisely in a written form that is grammatically correct....

Computation All students need to be able to understand and apply basic mathematics, at least through elementary algebra. An understanding of geometry and trigonometry is desirable....

Science and Technology ... American workers need to feel comfortable with technology.... As the use of advanced technologies becomes ever more pervasive in our economy, schools must encourage students of both sexes to acquire a firm grounding in science and technology....

High school graduates, therefore, need the confidence that they can understand how things work. Nothing builds this confidence so effectively as the study of specific technologies and the scientific principles underlying them. While devices may consist of thousands of parts, individual parts are often simple, as are the rules of their interaction. Facility with technology comes from understanding these rules and in working with devices embodying them. That ... is best achieved by combining classroom study with practical experience in school laboratories or outside school....

Competency in science and technology includes the ability to apply the scientific method...; that is, the ability to formulate and state hypotheses, and then to evaluate them by experimentation or observation. That competency will serve all graduates, whether they work in technical occupations or not....

Finally, education in science and technology should include acquaintance with computers. That does not necessarily mean learning programming languages and the like, but it does mean acquiring knowledge of the basic functions of computers....

Oral Communication Success in any job requires, among other things, the aptitude to communicate thought, knowledge, and information through speech....

Interpersonal Relationships Success in a career depends on the capacity to deal constructively and effectively with others. In turn, this depends on a knowledge of behavior appropriate to and customary in the workplace. Young people must understand that the standards of behavior, speech, and dress expected of employees often differ markedly from those acceptable in student circles. They also must realize that conflicting interests and opinions are inherent in many social interactions, but that such conflicts can and should be resolved through constructive means. Finally, they must recognize that employers cannot tolerate behavior, even if innocently intended, that offends customers, colleagues, other employees, or members of the general public....

Social and Economic Studies Understanding how employees and employers fit into the economic structure of the community and country is essential to an appreciation of one's own contributions and responsibilities.... Students can gain this understanding best through a knowledge of how the American society and economy function, how various groups and interests interact, and what they can expect of one another....

Personal Work Habits and Attitudes Personal work habits indicate the level of responsibility one is capable of assuming. Positive habits and attitudes contribute significantly to success in performing tasks, dealing with others, and gaining employment. They are also vital to success in school and should be cultivated long before a student enters the work force....

... [T]hese competencies are goals, by no means universally achievable to the same level by all, but nevertheless important for all to strive toward. [T]hey are incomplete goals, limited to those believed necessary for preparing high school graduates for satisfying careers. These goals must be supplemented by others if high school graduates are to participate fully in the cultural and civic life of this country.

Producing High-Quality Graduates

... [F]rom the employers' perspective, the fact is that too many graduates leave high school without an adequate command of these competencies.... The panel has not identified the precise causes of such shortcomings, but does emphasize that they do not lie simply with educators. The problems, and the responsibility for their solution, must be shared by parents, students, school boards, legislators, governmental administrators, employers, and the community.

... Constructive change, on the scale dictated by the vast size of the nation's educational system, will not come easily, but the necessary improvements can be made eventually if all of those concerned with education, including parents, governments, and employers, make a concerted, dedicated, and coherent effort.

Employers

... First, and perhaps most important, they can make a continuing effort to convince teachers and school administrators that the standards and expectations of private and public employers are reasonable, necessary, attainable, and, in fact, essential to the health of the national economy and the financial security and living standards of every citizen.

Further, employers should assist schools in the critically important task of advising young people about the possibilities available to them in their future careers....

Employers also should assist students in navigating the passage between school and work.... In an important sense, work is a foreign culture to many young people.... It is the responsibility of employers to help reduce the mystery of job-seeking.

Other productive roles for employers include:

- Working closely with local and state school boards to increase community support and involvement.
- Providing effective business management techniques to assist the school system and to support locally established programs and activities.
- Working with teachers and administrators to develop new programs and learning materials that demonstrate the application of classroom subjects to a working environment.
- Donating equipment, instructional materials, and the time of knowledgeable personnel.

Finally, employers can help school systems to meet higher standards (including employer expectations) through financial assistance and political support for adequate budgets....

School Boards

... Boards, and the senior administrators they employ, should determine the environments in which children learn best, and work to create and maintain them in their schools.... Of primary importance is the need to set achievement

standards for students. Administrators and teachers must be held accountable for providing programs that can bring students to such standards....

Finally, board members should insist that programs of study include exposure to the world of work. The boards should enforce high standards of accountability when schools offer programs intended to prepare students for specific jobs or kinds of jobs.... In all instances, board members ought to insist that occupational programs meet standards similar to those for college preparatory programs or the core competencies.

Schools

The panel believes that the basic responsibility of schools is to equip students with the core competencies requisite to lifelong learning. A second important responsibility of the schools is to make young people aware of the possibilities and challenges of their future careers.... Guidance should include academic, social, and personal concerns as well as the cultivation of attitudes and habits conducive to success in the world of work. Students need to understand the work ethic -- that work is a central reality of life -- one that, in addition to providing income, can pay well in satisfaction and self-esteem.

Schools also ought to teach students that mature citizenship entails responsible choices and that not all choices are easy or fun. Choices imply commitments and "trade-offs."...

Parents

Parents, who shape young people's motivations and values, must reassert their convictions that education and productive work are central components of a satisfying life. They must insist upon, and support fully, efforts to achieve high-quality education for their children. They need to help their children to develop ambitious and realistic career aspirations and work with them in exploring opportunities for achieving those ambitions....

Students

Students must prepare for a lifetime of learning by mastering the core competencies to the best of their ability. Young people are ultimately responsible for realizing their aspiration....

Government

... Although public funds for education have not been abundant in recent years, the panel believes that the American people will pay for high-quality education when and if they are convinced that their children are receiving it.

The federal government can contribute by supporting teacher training, curricula development, and experimental teaching programs. State and local governments can be powerful forces in facilitating cooperative efforts within communities....

Community Cooperation

... [T]he fostering of educational excellence that will provide the foundation for successful, satisfying careers must come from optimum community cooperation....

Summing Up

... Its purpose was to provide employers' views of the education needed by high school graduates seeking rewarding and upwardly mobile careers. It concluded that core competencies are the indispensable elements of such education -- a set of knowledge, skills, attitudes, and habits that will prepare high school graduates to continue learning throughout their lifetimes, to adapt to inexorable changes in the workplace, and, if desired, to further their formal education.

ATTACHMENT X

WHERE ARE THE TEENAGERS?
(HIGHLIGHTS)*

We have ... a problem confronting more and more companies of all sizes today -- the fast-increasing shortage of entry-level workers, both in absolute numbers and in the number of those with the skills and attitudes required to enter the workplace.

The problem is particularly acute now in the retail and service businesses....

But employers in many other fields will be feeling the impact not very far down the road. The Bureau of Labor Statistics says 9 million jobs will be created in the retail and service industries over the next 10 years -- at the same time the number of workers to fill them is contracting rapidly.

In addition, employers who look to graduates of colleges and various types of training programs will come up against the problem as this shrinking population category group moves through the economy behind the baby-boom generation now in the 25-40 age bracket.

The most obvious signals of the declining ranks of entry-level workers today are the ubiquitous help wanted signs that have become a permanent fixture in many stores....

Those signs are a colorful marketplace manifestation of demographic trends that began with relatively little attention in the mid-1960s....

In 1965, the number of newborns slipped below 4 million for the first time in 13 years and kept dropping....

There were nearly 9.7 million youths aged 16 to 19 in the work force in 1971, but their ranks were just over 7 million last year. And the 37 percent drop has occurred at a time of major economic expansion and job creation....

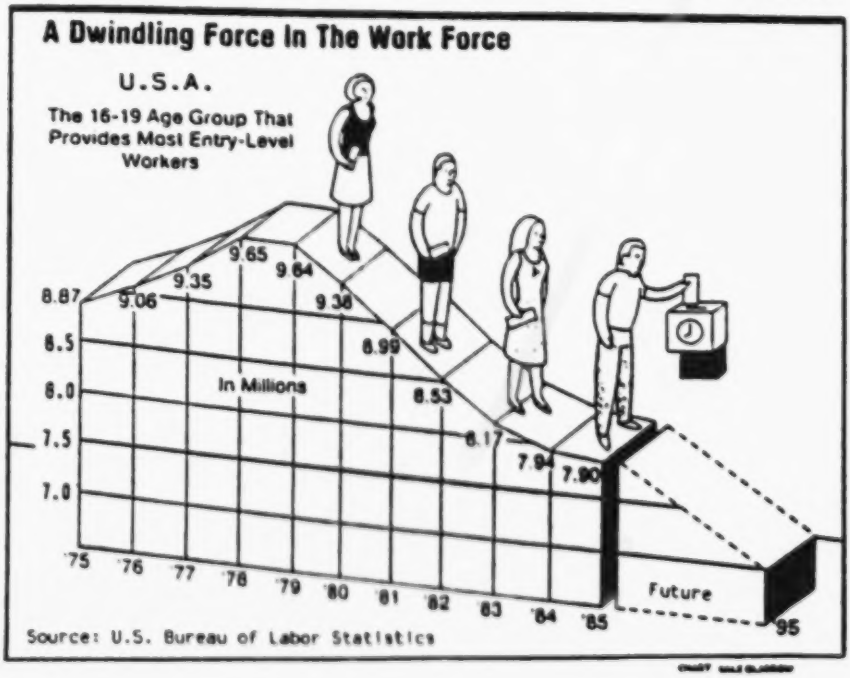
Taking a broader perspective, young people aged 16 to 24, who made up nearly a quarter of the total work force only six years ago, ... will drop to only 16 percent by 1995.

The baby-bust generation will move through the economy as a bloc, just as the baby-boom generation did. Census Bureau figures show that the number of Americans aged 20 to 24 will shrink from last year's 21.3 million ... to 17.1 million by 1995.

Population figures alone do not adequately convey the problem. An increasing number of teenagers, especially those from disadvantaged groups, are dropping out of school. They lack the reading and other basic abilities needed to function in the workplace. Many are mired in social problems that point to a lifetime of welfare dependency.

... [I]n an era of more job openings and fewer workers, youth unemployment is expected to increase.

... The number of minority youths will increase while the total number of youths of working age will decline. The number of high school dropouts will rise, as will the number of unwed mothers. At the same time, entry-level jobs will increasingly require basic analytical and interpersonal skills."...



* Harry Bacas, "Where Are the Teenagers?" Nation's Business, Aug. 1986, pp.18-25.

While acknowledging the increasing severity of the problem, affected employers are taking a wide range of steps to cope with it. One major effort is designed to give disadvantaged youths some of the fundamentals for employment and putting them in jobs where they can gain experience with the hope of advancement....

Other steps employers are taking to overcome the shortage of younger workers include an increasing reliance on older people, including some who have already retired, and on the capabilities of the handicapped....

Other companies that recruit younger workers are also taking steps to overcome the shortages resulting from both demographic and social factors ... tuition grants ... cash bonuses ... intermediate "career" positions....

Some of the strategies are aimed at bringing job seekers and jobs together. While unemployment among inner city youths ranges as high as 40 percent, jobs in the suburbs are hard to fill because the rapid growth of service industries there has heated up the competition for local young workers....

That pattern -- jobs in one place and available workers in another -- is increasing in large metropolitan areas. Public transit is often deficient....

Another technique employers use to maintain employment goals is to reach out beyond their immediate area....

For some employers, however, the experts say the emphasis will be on changing the nature of the jobs, rather than changing the method of filling them....

Employers in states facing economic problems are not as affected by the shrinking pool of young workers, because high unemployment rates mean workers of all ages are seeking jobs....

As the competition for qualified young workers intensifies, more employers are looking to alternative labor pools to satisfy their needs. They are considering groups once thought to be "unemployable."

Rehabilitative training has taken on a new urgency....

Summer Jobs programs mounted in major cities in recent years are part of a continuing effort by business and government to provide initial work experiences for low-income youth....

Increased productivity, more reliance on older or handicapped workers, improved transportation arrangements, and educational assistance and other incentives are all steps that employers are taking to overcome the growing shortage of entry-level workers.

But some experts question whether such actions can be more than stopgap solutions. Hiring older workers to do jobs that functionally illiterate school dropouts from the inner city cannot handle might take care of today's staffing needs, they say, but it does nothing toward solving the national problem of young people facing long-term unemployment in the midst of a booming economy....

The National Alliance of Business says that employers "must be more involved in our education system and training institutions and in the development of community and state strategies."

Without such involvement, ... "new technology, stiff international competition, changes in consumer taste, and demographic shifts will cause pervasive mismatches between workplace needs and work-force capabilities. The next 10 to 15 years threaten that growing cohorts of our working age youth and adults will lack the education and skills to obtain even their first entry-level job."

The Senior Citizen Solution

Although the aging of America is creating problems in the labor market, it also is pointing the way to solutions.

More companies are turning to the growing ranks of senior citizens to fill vacancies left by the shrinking number of young people.

Such workers usually bring greater knowledge, experience, willingness and reliability to the job.

...[M]ost companies with older workers prefer to give them temporary part-time employment. Second choice is permanent part-time employment.

Travelers [Corporation] itself has been "unretiring" some of its retired employees for more than five years. It offers them both temporary full-time work as replacements for employees on vacation or sick leave and regular part-time work sharing a job with other retirees. Since they are already drawing pensions, there are no additional pension costs.

Census survey shows higher education pays

By Desda Moss
USA TODAY

· FRIDAY, OCTOBER 2, 1987 ·

Workers with college degrees had an average monthly income of $1,910 in 1984, nearly twice the $1,045 average for those with just a high school diploma, says a new Census Bureau report released today.

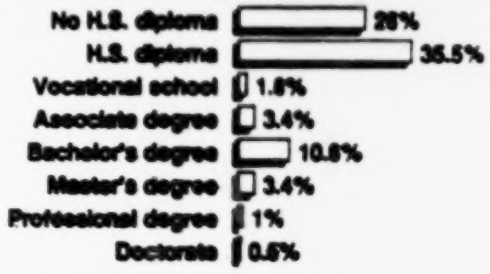
"There's strong evidence that the more education you get, the higher your pay and the lower your unemployment rate," said Patrick Scheetz, assistant director of placement services at Michigan State University.

Among the Census report's findings:

- About 21 percent of adults have earned a degree beyond high school: 23 percent of men, 19 percent of women.
- 53 percent of adults have only a high school diploma.
- Average monthly income for workers with a bachelor's degree was $1,841, but salaries varied between fields.
- 23 percent of the men had degrees in business, compared with 15 percent of the women.

College degrees scarce

Fewer than 16 percent of the people in the USA have a college degree. Percentage of people who have attained the following education:



By sex, race

	Men	Women	White	Black
No H.S. diploma	25.3%	26.7%	24.4%	38.6%
H.S. diploma	32.7%	38.0%	36.1%	32.7%
Vocational	1.3%	2.3%	1.9%	1.4%
Associate	3.5%	3.3%	3.5%	2.6%
Bachelor's	11.9%	9.5%	11.1%	5.2%
Master's	3.8%	3.0%	3.6%	1.5%
Professional	1.8%	0.3%	1.1%	0.3%
Doctorate	0.7%	0.2%	0.5%	0.2%

By age group

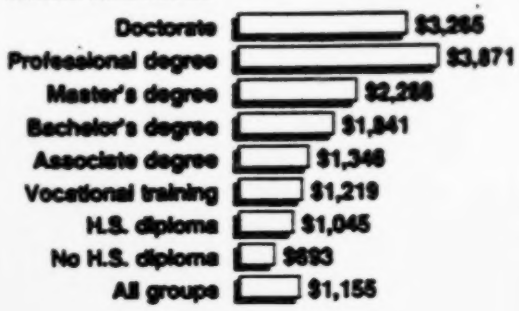
	18-24	25-34	35-44	45-54	55-64	65+
No H.S. diploma	18.8%	14.3%	16.6%	26.4%	36.2%	54.0%
H.S. diploma	38.8%	37.0%	35.7%	40.2%	35.3%	25.3%
Vocational	1.4%	2.0%	2.2%	2.0%	1.7%	1.5%
Associate	3.4%	5.2%	4.5%	3.0%	1.9%	0.9%
Bachelor's	6.9%	15.7%	14.2%	9.5%	7.9%	5.9%
Master's	0.2%	3.9%	6.4%	4.5%	3.1%	2.0%
Professional	0.0%	1.3%	1.8%	1.1%	1.2%	0.7%
Doctorate	0.0%	0.4%	0.8%	0.6%	0.6%	0.4%

Source: U.S. Census Bureau

By J.L. Albert, USA TODAY

Income parade

Average monthly income of people with these educational attainments:



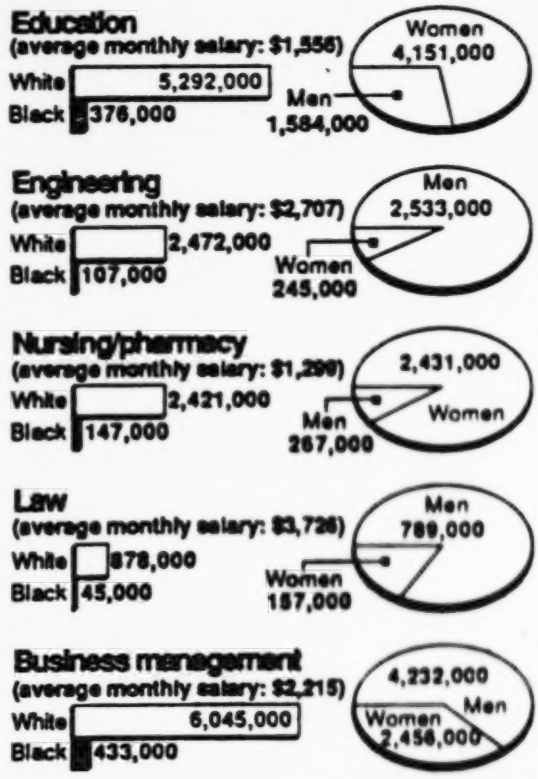
By sex, race

Education	Men	Women	White	Black
Doctorate	$3,667	n/a	$3,342	n/a
Professional	$4,309	$1,864	$3,927	n/a
Master's	$2,843	$1,645	$2,287	$1,966
Bachelor's	$2,455	$1,148	$1,881	$1,388
Associate	$1,755	$959	$1,367	$1,158
Vocational	$1,822	$923	$1,248	$860
H.S. diploma	$1,510	$684	$1,080	$765
No H.S. diploma	$973	$453	$734	$513
All groups	$1,620	$734	$1,208	$754

n/a - too few people in category for representative sample.

Where we are working

Breakdown of people working in various professions:



ATTACHMENT XII

SOCIAL COST OF DROPPING OUT OF SECONDARY SCHOOL*

A. SOCIAL COSTS OF DROPPING OUT

1) Individual or private costs
   a) Higher unemployment rates
   b) Higher periodic losses of employment
   c) Relegation to lower-paying occupations

2) Public or societal costs
   a) Lower productivity level (capacity and output)
   b) Lower income and lower tax revenue
   c) Greater need for welfare and unemployment subsidies
   d) Higher crime rates and associated social and judicial costs
   e) Higher health-care costs
   f) Lower electoral participation rates
   g) Tendency for similar parent-child educational attainment

3) Imbalanced distribution of dropout problem across societal groups
   a) The poor b) Language minorities c) Ethnic minorities

4) Suspicion that "contortions of the schools designed to keep would-be dropouts in could lead to qualitative differences in schooling, differences possibly interpreted as negative by potential employers"

B. SOCIAL COST ESTIMATES: 1981

1) $4947 annual income loss per average dropout (nationally): $5661/male, $4232/female

2) $1496 annual tax revenue loss per average dropout (nationally)

C. MISMATCH BETWEEN DROPOUT PROBLEM AND GENUINE PUBLIC ATTENTION

1) Costs may be generally underestimated: some appreciation of problem's magnitude suggested by school officials and legislators

2) Specific mismatch
   a) Dropout losses are <u>national</u> in impact, but
   b) Schools are <u>local</u> and <u>state-level</u> enterprises.
   c) Failure of citizens to generate income affects school officials and organizations only marginally, indirectly, eventually
   d) Differing time frames between intervention and benefit
      (1) Allocations of <u>current</u> public resources for promise of <u>future</u> returns
      (2) Electoral politics and "current" needs can dampen enthusiasm for long-term futuristic investing.
   e) Lack of consensus on ways to effectively encourage school completion
   f) Local development of answers to dropout problem seems required
   g) No nationwide attack plans exist
   h) Resistance or pessimism regarding dropout suggested by current behavior of school officials
      (1) Dropouts written-off as too expensive or troublesome to serve?
      (2) Dropouts out-of-reach long before they become evident?

3) Cost of educational deficit "will probably grow before we act concertedly to reduce it."

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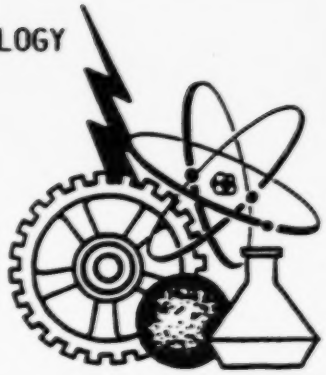
* <u>Source</u>: *James S. Catterall, "On the Social Costs of Dropping out of School." University of California, Los Angeles, (Revised). December 1985.*

ATTACHMENT XIII

PROJECTED ADVANCES IN SCIENCE AND TECHNOLOGY



In 1987, a group of over 500 scientific, engineering, educational and business experts associated with the Corporation for Science and Technology, located in the State of Indiana, predicted that **"the world is on the verge of a major lifestyle, business, industry and educational upheaval, an upheaval which will be fueled by rapid technological growth and by a very competitive worldwide marketplace. This upheaval brings with it major threats and opportunities to the business and economic base of the United States."**

ADVANCED MATERIALS TECHNOLOGY is generating a great deal of excitement by the development of new materials in the laboratories, materials that have not existed previously -- materials in the fields of semiconductors, polymers, ceramics and others.

Major materials-fueled advances are predicted in the fields of powdered metalurgy, in super plastics and adhesives, in polymer, ceramic and metal-based composites, in steel surface treatments, in superconductive materials, in new metal materials, and in structural ceramics.

In the area of **AGRICULTURAL GENETICS AND TECHNOLOGY**, the headlines center around new genetic manipulation and embryo transplantation in animal agriculture operations; plant genetic modification to provide improved plant characteristics; and integration of computers and artificial intelligence controls into a broad range of agriculturally related operations.

And in **ARTIFICIAL INTELLIGENCE**, the committee forecasts major advances in the use of expert systems, in the development of AI-oriented computer architectures, and new AI higher-order languages. They see the technology entering the field of natural language driven processing, in image and verbal recognition systems, in the translation from one language to another, vision for robotics, new generations of optical scanners to read and respond to written text, computer-aided instruction management and control, automatic programming and debugging of computer software, complex communications systems management and control, and in the development of materials and genetics characteristics prognoses.

In **BIOTECHNOLOGY**, a virtual technological explosion is predicted in which DNA probes, monoclonal antibodies and enzymes have been identified as high growth areas. Major advances in the areas of medical diagnosis and treatment, plant and animal characteristics engineering, and waste management are foreseen. Another major growth area is seen to be biotechnology-related manufacturing and quality-control systems as this technology begins to "take hold" across a wide range of industries....

In the field of **CONTROL SYSTEMS**, another rapid acceleration scene is predicted as advances in computers, microelectronics, optical systems, and Artificial Intelligence fuel the development of highly capable control systems throughout industry, homes, hospitals, military systems and others.

Many of these systems will be vision capable and will utilize sophisticated sensor systems in real time, iterative-feedback process-control systems, in order to maintain the high level of control that many of the new processes will require.

Source: Excerpts from the Technology Overview Report Presented by Dr. John D. Hague, Sc.D. - President of the Corporation for Science and Technology Combined Targeted Technology Committee Members Meeting, Indianapolis Convention Center, April 24, 1987. Extracted by Dr. J. P. Lisack, Purdue University.

In **ENERGY DEVELOPMENT**, advances are foreseen in the areas of new combustion technologies, post-combustion treatments, co-generation systems, and in shale-oil extraction systems. High-efficiency solar voltaic systems are also envisioned.

In the field of **INFORMATION PROCESSING**, the forecasts are for continuing explosive growth, with computing power per dollar continuing to double every four years during the period. New generations of software development will be aided by AI-based software generators and evaluators. ... [There will be] simultaneous voice and data handling systems that can place the information that you need where you need it. Strong shifts to parallel processing are predicted. [Workers and] the general public [will be] increasingly involved with computers and computer products.

In **MANUFACTURING TECHNOLOGY**, the committee sees advances in artificial intelligence, electro-optics, information processing and control systems paving the way for major expansions in the applications for manufacturing technology. They see the need for increased automation to maintain the process controls that will be required and to deal with the reduction of product cost. They see integrated design, manufacturing and quality-assurance systems geared to support both high and low volume production...and they see interface standards emerging that will facilitate increased competition, lower costs and higher quality manufacturing technology. They see advanced control systems, many with 3-D vision, color and pattern recognition, with sophisticated tactile and force sensors. And they note the need to be able to deal with new materials that are beginning to enter the field.

In **MEDICAL TECHNOLOGY**, advances in biotechnology, in microelectronics, in telecommunications, artificial intelligence, optical technology and others will accelerate the development of sophisticated medical diagnostic, treatment, and management tools. The trend to out-patient treatment and care will accelerate the development of doctor's office and home-based systems for patient care. Less invasive surgical processes will increase, [including] lasers. Significant advances in the monitoring and control of anesthesia procedures are expected, as well as implanted microelectronic circuits to reinstate muscle control and bodily function control.

Biotechnological breakthroughs are expected to allow for improved diagnostics and patient treatment, as well as to allow the detection of persons who tend to be predisposed to given medical problems, such as high cholesterol and heart disease.

And in **MICROELECTRONICS**, the committee envisions continuing explosive growth as higher densities, higher speeds, higher reliabilities and lower costs continue.

They see the increased use of Application-Specific Integrated Circuits (ASIC) by the medium and small sector of industry in order to protect their designs and to remain viable in cost and product capability. They see extremely high densities with an anticipated maximum of 100 million components per chip, with 5 million components per chip in the early 1990s and between 10 and 100 million by the year 2000. The anticipated advances in this technology will cause the microcircuit to permeate virtually every area of endeavor.

And in **OPTICAL TECHNOLOGY**, we have another explosive situation in which optical data transmission through fiber optic systems will mature and spread rapidly and set the stage for a rapid increase in low-cost, broad-band communications. Optical sensors will provide automation systems with the inputs that they need for monitoring and control...and optical computers will emerge as the solution to many high-speed computing needs. Optical data-storage-technology breakthroughs will usher in a new generation of information-storage systems with widespread applications in our factories, homes, schools, offices and retail outlets, and in our communication systems. The optical technologies are so basic to the next generation of products, processes and operations that they deserve attention by virtually every organization, regardless of their present products, processes or functions. The optical technologies will constitute major threats and opportunities for thousands of businesses worldwide.

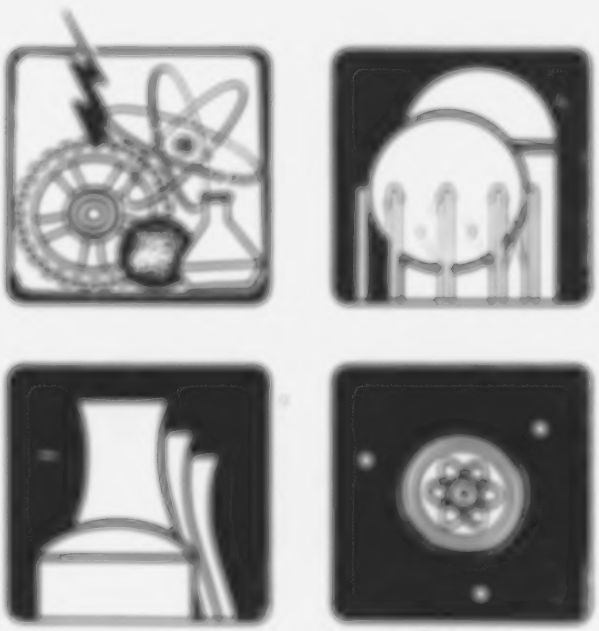
And in the case of **TELECOMMUNICATIONS**, again major changes are foreseen. Single integrated-digital-network systems are predicted to replace individual stand-alone systems that presently handle phone traffic, data and facsimile traffic and local-area network traffic. They see the emergence of a worldwide digital network protocol, paving the way for explosive growth in the digital communications industry. They see major increases in the use of microelectronics and optical technologies in telecommunications systems, both local and long distance. And they stress the probable impacts of this telecommunications network upheaval on all sales of business and industry education, the medical care industries and the home.

OVERALL

The message is clear that very low-cost, very reliable microelectronics systems, coupled with low-cost, reliable optical-based data transmission and sensor systems and with powerful artificial-intelligence or expert systems will bring a new generation of total communication into use. This communication upheaval, coupled with the expected breakthroughs in the other targeted technologies will begin to change the ways we do just about everything in our homes, in our factories, in our hospitals, our doctors' offices, transportation systems, in our offices, in our schools, on our farms, [on the construction site,] and virtually everywhere else...and we will have higher levels of worldwide competition than we have ever seen before...competition in research, engineering, design, manufacturing, sales, and product support...and many of our present product lines will be decimated by next generation products and services...and there is nothing that we can do to slow down the process or to stop it nor is it sensible for us to try. In fact, our prognosis for change is probably very conservative and the changes will happen more quickly and more deeply than we now anticipate.

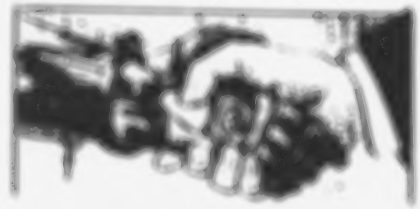
* * * * * * * * *

Dr. Hague concluded with this statement, "Well, that information all went by so rapidly that you probably feel as if you have just taken a drink from a fire hose...."



CHANGE IN AMERICA

Between now and 2000, shifts in work and the workforce are certain to transform much of U.S. higher education



The proportion of the labor force from 16 to 24 years old will shrink from 18 per cent in 1987 to 16 per cent in 2000. Higher education, however, and the military will all be competing for this segment of the population for their recruiters, employers, and recruits.

An estimated 29 per cent of the net growth in the work force during the next 13 years will be in minority groups. Yet high school dropout rates, which run nearly 30 per cent nationally, are 40 to 50 per cent in some inner city areas with large minority populations.

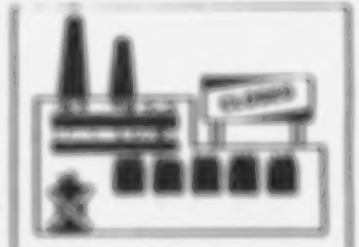
Women will account for about 63 per cent of the new entrants into the labor force between 1987 and 2000 and will increase their demand for child care.

Between 2 and 3 per cent of the nation's labor force — which is projected to reach about 130 million by the year 2000 — may need to be retrained each year.

Between 60 and 80 large companies account for half of the formal training paid for by businesses and industry. Small businesses, which generate most of the new jobs, often cannot afford to pay for such training.

Although there will continue to be substantial shifts in the size and types of jobs in coming years, the development of businesses making high-technology products — which many states are emphasizing in their economic development plans — will not necessarily be a panacea. Several studies have found that such high-technology industries account for only 4 to 5 per cent of the new positions created each year, although more jobs are opening up in businesses that use computers and other high-technology equipment.

In the next decade, about six million more jobs are projected in the most skilled occupations — executive, professional, and technical — compared to only about a million new jobs in the low-skilled and laborer categories.



Between 1979 and 1983, an estimated 11.5 million people lost their jobs through plant closings, relocations, or technological innovations. An estimated 29 per cent of these people need to improve their basic skills in reading, writing, mathematics, and communications if they are to find jobs with good chances for advancement.

About 13 per cent of U.S. adults are illiterate in English. That means between 17 million and 21 million Americans will have difficulty reading a job notice, filling out an employment application, or understanding an instruction manual.

ATTACHMENT XV

NUMBERS OF HIGH SCHOOL GRADUATES PROJECTED TO 2004

Dramatic changes in the number of high school graduates projected for the next 16 years will present difficult planning problems for educators and employers, predicts the Western Interstate Commission for Higher Education (WICHE). ... [R]ecent projects indicate a decrease in the number of young people graduating from high school [through 1994,] ... followed by increases to a level that is expected to surpass current (1986) levels before the year 2004....

Careful educational planning based on reliable information will be essential, ... especially since regional, state, and local patterns will vary from the national trend because of differences in population growth and composition, economic conditions, and other factors.

Nationally, the 1978-79 peak in the number of high school graduates was followed by decreases through most of the 1980s, reports WICHE in "High School Graduates: Projections by State, 1986 to 2004," published jointly with the College Board and the Teachers Insurance and Annuity Association.

A current upturn -- modest in numbers and of short duration -- will be followed by a steep slump beginning in 1989, a low point in the mid-1990s, and then sustained increases into the next century, the report predicts.

Among public high schools, which account for 90 percent of graduates, "the recovery in the late 1990s will be almost as dramatic as those earlier decreases, with the projected public school total in 2004 nearly 13 percent higher than [the number of] 1986 graduates and only 4.3 percent less than the 1979 historical peak," WICHE reports.

The situation is not as optimistic for private high schools, ... since the numbers of their graduates are projected to decline steadily in the 1990s, based on current enrollment patterns.

The national picture hides marked differences in the patterns of graduates across the following regions and states:

- Northeastern states -- the most severely hit by earlier declines in school populations -- will continue to experience substantial decreases in numbers of high school graduates. Only Maryland, New Hampshire, and Vermont can anticipate more high school graduates by 2004. Overall, the number of graduates in the region in 2004 will be nearly 5 percent below the 1986 number.

- All Northcentral states will experience decreases in the size of their graduating classes until 1992, with some state graduating classes falling as much as 12 percent. The recovery from the low will be slow; by 2004 the region will have 9 percent fewer graduates than in 1986. Only Kansas, Minnesota, and Missouri will have graduate numbers that match or barely exceed their 1986 class size.

- The South and Southcentral states will graduate 16 percent more students in 2004 than in 1986, but the changes in the 1990s will vary from state to state. Seven of the 14 states in the region will have more graduates, led by Florida's projected 63 percent increase. The other seven states are expected to have fewer graduates in 2004 than in 1986, led by West Virginia with a 31 percent drop.

- Decreases in the early 1990s will be less severe in the West, ... with the number of graduates expected to exceed those in the Northeastern and Northcentral states by 2004. ... Western states will graduate 44 percent more high school graduates in 2004 than in 1986, although there will be variations within the region. For example, Arizona and Nevada will double the size of their 1986 class, while Idaho and Wyoming are expected to be among the states with the greatest declines between 1986 and 2004.

Because of population mobility, variations in birth patterns, and economic conditions, what is true for the nation as a whole is not uniformly true for regions, states, and localities....

The report is available for $7 from WICHE Publications, P. O. Drawer P, Boulder, Colorado 80301-9752, (303) 497-0310. More detailed supplemental information on each state and region, as well as computer-readable data, are available at additional cost.

Source: "Higher Education & National Affairs", Newsletter of the American Council on Education, Vol. 37, No. 9, March 31, 1988.